

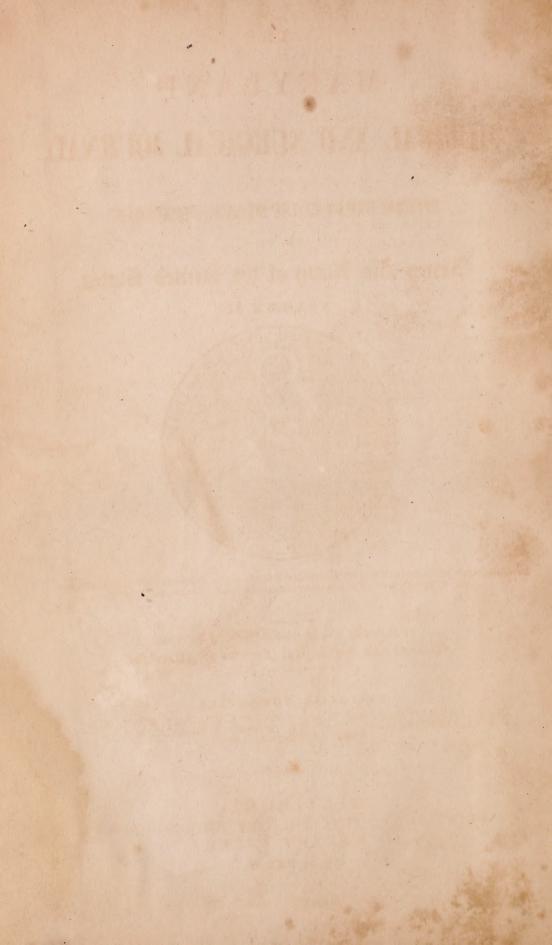
D. Clapp.

8.8



Digitized by the Internet Archive in 2012 with funding from Open Knowledge Commons and the National Endowment for the Humanities





## MARYLAND

# MEDICAL AND SURGICAL JOURNAL,

AND

OFFICIAL ORGAN OF THE MEDICAL DEPARTMENT

OF THE

Army and Navy of the United States.



Qui ante nos ista moverunt, non domini nostri sed duces sunt. Patet omnibus veritas; nondum est occupata; multum ex illa etiam futuris relictum est.—Seneca, Epist. 33.

PUBLISHED UNDER THE AUSPICES OF THE Medical and Chirurgical Faculty of Maryland.

#### EDITORIAL COMMITTEE.

HENRY LEE HEISKELL, M.D. U.S.A. | JOHN A. KEARNEY, M.D. U.S. N. ROBERT A. DURKEE, M.D. JOHN R. W. DUNBAR, M.D.

## BALTIMORE:

PRINTED AND PUBLISHED BY JOHN MURPHY, 146 MARKET STREET.

M DCCCXLII.

ATTORIST THE STATE OF THE PARTY 

THE

## MARYLAND

# Medical and Surgical Iournal.

JANUARY, 1841.

#### BOYLSTON PRIZE ESSAY.

## \*CUTANEOUS AND MUCOUS EXHALATION.

BY ALBERT T. WHEELOCK, A.M. M.D. M.M.S.S. BELFAST, MAINE.

Part I. The great mark of distinction between animate and inanimate bodies, is, in the different relations they sustain to the ordinary laws of the material world. Unorganized bodies possess no power in themselves, to change in any way, their condition or properties. They are obedient to regular and unvarying laws, so that we may infer with precision the results of placing them in any given condition, and the action of certain other bodies upon them. Wherever any of these bodies are left by nature herself, there we may expect to find them—whenever they are accidentally or designedly brought into the sphere of the action

<sup>\*</sup> For this article was assigned the Annual Prize of the BOYLSTON MEDICAL SOCIETY OF Harvard University, for the year 1839. The editors regret that it came to hand too late for the original department of our last number. Part II. will be published in our next. We shall be highly gratified to hear from Dr. W. as frequently as his duties will permit him to write for the Journal. Eds.

of other substances, the legitimate effects are produced. If a heavy body be projected in the air, it falls till it meets with a greater resistance. An exposure to a certain degree of heat produces in some bodies liquefaction, in some combustion, in others volatilization. But when the same material elements enter into the composition of living bodies, their circumstances become essentially changed—they obey an entire new set of laws, which are those of physical life, and they seem to have acquired the power of resisting the impulses and laws that before controlled The eagle soars in the air to an enormous height, as it were in defiance to the laws of gravity, when the same body unendowed with its new properties would have remained motionless on the earth from which it had proudly risen. A man in the Polar regions endures with impunity the severe cold of that climate, and the temperature of the internal parts of his body is not reduced so much as a single degree—but when life is extinct, he soon becomes like the frozen masses of inanimate matter about him. In investigations into the phenomena of living bodies, we find ourselves obliged partially to lay aside the acknowledged laws that govern matter in other situations, and to consider it as it is modified by its organic state as well as changed in its relations to external things.

As preliminary to the present subject, we must first consider the anatomical character and functions of the skin and mucous membranes. The skin is that thin covering spread over the whole surface of the body, to bind it together and protect the internal textures,—being composed of three layers of membrane, viz:—the cuticle, mucous coat, and the corion. The cuticle is a very elastic thin membrane, without perceptible bloodvessels or nerves, and destitute of sensibility. From microscopic examinations, it has been supposed to consist of minute lamina or scales, overlapping each other like "the tiles of a roof," or more like the scales of other animals. It is without doubt porous, although from its great elasticity the pores are not visible, as it may be perforated by a needle and yet the hole not be perceived even by the microscope. It appears to be of importance in impeding excessive perspiration, and resisting absorption,—enabling the

individual to be exposed to the most poisonous effluvia for a long time without serious injury. Immediately beneath the cuticle is the mucous coat of the skin, which is the cause of the variety of color that distinguishes the people of different climates as well as different people of the same climate, being white or rather of a light gray in the European, brown in the Asiatic, and black in the African, forming complexions of every variety of shades, "from the swarthy hue of the negro to the fairest skin of the inhabitant of the Caucasus." This is destitute of blood-vessels, but absorbs substances readily. The third or inmost layer, called the corion, constitutes the principal thickness of the skin. Unlike the two other layers, it is vascular and sensible. It is not only the seat of sensation and of touch, but is also the instrument of a very important exhalation, viz: the perspiration.

The animal frame is constantly undergoing a round of decay and renovation. New nutritive material is taken into the stomach, dissolved, distributed through the system, and after having performed its office in all the different parts of the body, it passes off by the several excretory ducts, among which the skin is the most active; and if we consider the extent of its surface, which is about two thousand five hundred inches in a man of ordinary size, we can have some idea of the amount of its agency in carrying off the useless matter from the body. This is done by the insensible perspiration transmitted through this tissue, without the inconvenience of perforated pores; so that the perspiration may be considered a secretion, produced by the action of the sudatory glands, and the skin as one wide and diffused perspiratory gland, separating a subtle fluid out of the circulation, "from the invisible vapor of perfect health and ease to the profuse and colliquative sweat of the languishing hectic." This fluid consists of superfluous animal gas and water. If a polished mirror be brought near the exterior of the body, it will be seen condensed on its surface and become rapidly visible, varying in amount according to the health of the individual, the abundance of the nutrition, the state of the atmosphere and other circumstances.

The mucous membranes are continuous with the skin and anala-

gous to it in many respects, lining all the internal cavities of the body that are exposed to the air in the same manner as the skin does the external parts. They secrete mucus in all these cavities suiting the wants of each part, and modified to answer to the functions of the different organs where the membranes are found. These secretions are often found too abundant, or too sparingly produced, in various diseased states of the system. These membranes are vascular, as well as the skin. They have papillæ, not less than the skin. They are well supplied with nerves, in which also they resemble the skin.

Experiments have been made with a view to ascertain the precise amount of the exhalation that is carried out through the skin, but there are so many modifying circumstances in respect to the health, constitution and mode of life of different individuals, that the results are not exclusively to be depended on for general application. Sanctorius, who weighed his body, his food, and his excretions, every day for thirty years, came to the conclusion that five out of every eight pounds of nourishment that he took, passed out through the skin, leaving only three pounds to be carried off by the lungs, bowels, and kidneys. The celebrated French chemists Lavoisier and M. Seguin, made experiments with the same object. M. SEGUIN shut himself up in a bag of glazed silk, having an orifice at the mouth for breathing, where it was fastened to the lips with pitch. He weighed himself at the beginning of the experiment in the bag, then at the close also; which gave the loss of weight by the lungs, and finally weighed himself out of the bag: subtracting this and the loss of weight by the lungs from his weight at first, he found how much he had lost by the skin in this time. These results varied somewhat at different trials, but he found that the average amount of the exhalation from the skin, was about three pounds in the twenty-four hours. It would be found of course that in a corpulent person or in one highly nourished or in the habit of severe exercise, and in those in whom the opposite condition prevailed, the results would be The highly nourished person would need less of the food that he took, to supply the wants of the system, so that supposing him to take the same amount of food in the same time,

there would be a greater amount thrown off from the body of such a person than from one that had taken previously, barely nutrition sufficient for the actual requirements of the animal economy. There is a marked difference in individuals in the activity of all the glandular and circulatory system, and it is often seen, that thin, spare persons shall constantly take as much nourishment as others; but it is carried off from the system, leaving but just the same amount of food for the growth of the body as though only a portion of the amount of food had been taken. The corpulent person will find that if he diminishes his food to much less than the usual quantity, and continues to do so for a length of time, his weight remains nearly the same; and unless exercise or other measures are used to excite the activity of the exhalents and the different excretory functions, they will often cease to carry off the same amount as before, becoming less active in proportion to the diminished need of their exertion. So that the lean spare person is often baffled in any attempt to increase the bulk of his body by indulgence in an abundance of nourishing food, even to the extent of over-taxing the healthy power of the stomach, and bringing on serious disease. An attempt to reduce the weight of the body by abstinence without thorough and regular exercise, will be productive of more permanent and dangerous diseases than in the other case, without materially tending to produce the designed effect, or succeed in its object.

When much moisture is present in the atmosphere, this perspiration from the body would be more likely to show itself—other things being equal—than in a dry air, from the mechanical obstruction that is offered to the evaporation of its aqueous part. And as most of its matter is more or less mingled with water, the influence of different kinds of weather may be imagined, although the effect would be slight in comparison with the more serious interruptions of this function by disease. Any one whose system is sufficiently delicate to perceive the different effects of a damp east wind, and of the dry bracing weather of autumn or winter, knows by experience the influence of inactivity of the exhalent vessels. The less free separation of secrementitious matter from the surface by an obstruction of the action of the capillaries, may

be sufficient to account for those depressing feelings produced by long continued, damp, cold weather. This matter is evidently of a secrementitious nature, and especially that which is insensible or carried off imperceptibly in ordinary states of the body, when at rest. Sweat, produced by severe exertion or by the effect of medicines, is not probably wholly secrementitious, and often carries off matter that might safely remain in the body. But insensible perspiration, being a natural secretion, requires to be performed perfectly no less than that of the bile or urine. It is no less important to the health of the system that the first should be thoroughly separated from the system, than the latter. Either being stopped produce more or less disease. Interruptions of the first are commonly more easily managed, while serious obstructions of the latter are often speedily fatal.

When the skin is not in a healthy state, or the perspiratory function is deranged by cold, or any other cause, the whole amount of the retained matter is thrown back on the internal organs; and when we consider the effects that are known to result from remaining a long time in an atmosphere loaded with these animal effluvia, as in crowded and heated rooms, we should suppose that this exudation, if suppressed, would be a fruitful source of disease, especially if this state continue for a length of time that is not unfrequent, in certain conditions of the body. This insensible perspiration may be suppressed from a variety of causes, of which exposure to cold is the most common. The skin in this situation is dry and shrivelled, and seems by its contraction to leave no way for the escape of the perspiration in the usual manner, when it must of course remain in the body, or be carried off through some other parts of the system. A great part of it is retained in this state of things, within the body, and as it has become useless to the system, will remain as a foreign substance, that if not absolutely poisonous, will evidently be a cause of disease. It will be admitted at once that twenty or thirty ounces of this suppressed secretion cannot be daily accumulating in the body without injurious effects.

When any excretory gland is impeded in its functions, and ceases to perform its part in throwing off the useless elements

from the body, unless some other organ supplies this deficiency, the matter must remain in the blood or in some other part of the system, and give rise to a greater or less morbid excitement. If from any cause the substances composing the bile are not separated from the blood, it will become an immediate cause of internal disorder and irritation. In the same manner any torpor of the cutaneous exhalents becomes a source of disease; local irritation invariably follows as the initial symptom whence a series of deranged actions have an origin. If any portion of the capillary system be predisposed to it, high vascular action will be apt to occur in this part, perhaps even actual inflammation. mucous membrane of the respiratory passages be predisposed to irritation, catarrhal or pneumonic affections will be the consequence; if the alimentary canal be in a state of accidental or habitual irritability, dysentery or enteritis will be the consequence.

Diseases of this nature appear more frequently when the warm sultry days of summer are succeeded by the cold and damp evenings of autumn. Most of these complaints at this time can easily be traced to some exposure and change of temperature, which would be expected to be sufficient to cause a sudden chill on the surface of the body, producing cold extremities, a cold skin, and such symptoms of a disturbance of the external capillary system. Such complaints are rarely found in our climate excepting at that season, nor during steady mild weather, and a considerable uniformity of heat and cold successively for a number of days, at the same time there being ordinary attention to the clothing and exemption from undue exposure. They are also not common in those countries where there is a dry and regular atmospheric state, as for examples, the elevated tracts of the torrid zone, the cities of Mexico and Quito, and the sandy plains of the south of Asia.

Most of these diseases of the alimentary canal were formerly referred to unhealthy food, unripe fruit or vegetables; but when we take into consideration the circumstances that attend the commencement of the attacks and the symptoms when such diseases occur, they are plainly attributable to some other causes. Such

substances are not wholesome nourishment, but are not sufficient to occasion all the trouble that has been laid to their charge. A disordered state of the surface is found to be the chief cause, and the physician will often find himself at fault if he directs his remedies entirely to the evacuation of these substances from the bowels. When the chills of autumn begin to succeed the heat of the summer season, we may always expect to find the usual disturbances of the alimentary passages produced by the exposure to sudden changes of temperature. It is no doubt true that the intestines are often predisposed to disease by the previous use of unwholesome food, so that they are ready to be irritated and disturbed by any slight derangement of their functions. The mucous membranes of their internal surface would seem to be more exposed to the action of external causes from their proximity to the outside of the body. The clothing, especially about the abdomen, is of a thin kind at this season, rendering the body still more susceptible to the influence of the changes of temperature. The temptation to expose one's self after the oppressive heat of an August day to any change of temperature that may seem to bring a refreshing coolness, is productive of a vast amount of disease and death. Some constitutions may bear up under it for a time, but it can never be practised with impunity. With some individuals, a free exposure to the night air after the heat of one of our warmest days in the latter part of summer, would be certainly fatal; others will escape with an attack of enteritis, although some may seem for a time to experience no bad effects.

In most countries of the Equatorial regions disease from this cause is more frequent than in temperate climates. In those parts of the globe, the comparative difference of temperature between the nights and days is very great. After their hottest weather of the year, the chilly air of the nights produces at once a feeling of discomfort if one is exposed to it in the same dress that has been worn through the day. Even the native inhabitants learn to avoid the night air as much as possible, from a knowledge of the bad effects wont to result from exposure. Attacks from this cause are so severe in those countries as very often to be beyond the reach of remediate measures at once, so that

the common medicines employed in such cases seem to have no perceptible effect. With all the evidence that we possess of the system becoming charged with substances of an irritating character from exposure to cold or other causes, we proceed to consider the treatment that would be proper in diseases of this nature. Among the most important of remedial measures should be, to restore the activity of the external surface, and to evacuate the unhealthy collections of matter found in any part of the body. To fulfil this indication we should make use of diaphoretic medicines as one of the most important parts of the The healthy action of the skin and external capillary system would have carried this noxious matter now retained in the body through its natural avenues and separated it entirely from the system, but in the diseased state of these functions they may be entirely inactive, ceasing to perform any of their important offices by their unassisted powers, and until stimulated by medicines. With a suitable attention to other symptoms when they present themselves, those medicines that produce a tendency to the surface, open the pores of the skin, and promote a more or less copious diaphoresis, will be found to remove the immediate cause of the disease and relieve this oppressed condition internally.

Diaphoretics act either by relaxing the transpiratory vessels—or increasing their activity by establishing an increased flow of blood to them—or often by producing both these effects. They increase the natural exhalation, and produce it at other times when it is entirely wanting. But in different states of the system, different diaphoretics are necessary to be used. For example, during the high febrile excitement of an exacerbation of the cynanche, the same diaphoretics should not be employed as in attacks of the Cholera Morbus attended with a languid circulation, pale shrunken skin, and cold extremities. Sometimes defect of circulatory action is found, in other cases it is too great. In the one instance the medicines and treatment are to be of a stimulating character, generally increasing the activity of the circulation; in the other, diaphoresis is more rapidly produced by those articles that have a tendency to lessen the action of the heart and arteries,

and by those measures that would be considered antiphlogistic. So that in some cases, stimulant diaphoretics would be injurious, unless the undue action in the vascular organs is diminished by bleeding and evacuations from the bowels.

The ultimate effect of diaphoretics in every case, is probably antiphlogistic, for the same reason that a purgative is so-although their primary operation may be stimulant—and in certain conditions every stimulant will be diaphoretic. During the operation of the diaphoresis a portion of the substances of the body will be thrown off in the fluid state. There will be an evacuation of the matters that may have been improperly retained in the circulation-at least probably useless and burdensome. The vascular system thus rids itself of an oppressive load which might have been a cause of irritation. If it is carried so far as to separate the noxious materials only, a feeling of relief is always immediately experienced. In any disease attended with a hot and dry skin this effect is obtained by a moderate diaphoresis, and as effectuallyif continued for a sufficient time—as a more active one. Free sweating, although often necessary in many acute diseases, produces a degree of subsequent debility, if continued to some length, and causes a subsidence of the action of the heart and arteries by the general relaxation of the muscles. As a general thing, it is found that an influence of this kind carried only far enough to promote a very moderate diaphoresis and kept up for a proper length of time, is as efficient in its remedial agency as though carried to a much greater extent—with the further preference of not leaving the system liable to exposure from atmospheric changes. It cannot however be supposed that in all instances the promotion of an insensible perspiration from the surface will be so effectual as a free and copious diaphoresis.

Although any stimulant may under certain circumstances, be diaphoretic, by increasing the general action of the vascular system, it is not supposed that every diaphoretic acts in this manner, as many of these remedies undoubtedly possess a peculiar tendency, not only to determine the circulation to the surface without particularly increasing the action of the heart, and large arteries, but also specifically to excite the activity of the perspiratory ves-

sels. The effect by which these are useful in inflammatory affections of the internal organs, is to increase the flow of blood to the capillaries of the skin, and external parts, producing a kind of local determination from the affected organs. They are also beneficial in another manner, as a general depletory measure, bringing on the natural secretion of the exhalents, and enabling them to throw off from the body in a proper form, those substances, that it is their office to separate from the general mass of the blood.

When given to a sufficient extent, they produce free sweating. There are circumstances when it is important to obtain such a result, both when it would be unsafe to wait for a more gradual operation and where it is required to be performed thoroughly for its depletive effect. This can almost always be produced in any state of the system by some external means in connection with the internal remedies. But it is attended always by some subsequent debility, and in most diseased states requiring treatment of this kind with no more beneficial effects than would follow a moderate diaphoresis continued for a longer time, by the administration of small doses of the medicines we have been considering, frequently repeated. This course is not succeeded by the weakness and prostration that is often attendant on a full and rapid diaphoresis.

TO BE CONTINUED.

## OBSTETRIC REPORTS,

WITH

#### REMARKS ON SPONTANEOUS EVOLUTION.

BY GRAFTON TYLER, M.D., PRINCE GEORGE'S COUNTY, MD.\*

On the night of the 27th May, 1840, at ten o'clock, I received a note from a medical friend, requesting my immediate assistance in a difficult obstetrical case. On my arrival, he stated to me that he first saw the patient about eight hours previous; that she had, before he was sent for, with the assistance of an old woman, (a midwife in the neighborhood,) been delivered without difficulty of a healthy, full grown child; a second was then presenting. The waters had been discharged some time; the hand and arm were in the vagina; the pains very strong and almost constant. Finding the contractile power of the uterus to resist all efforts at turning, he endeavored to produce relaxation by bleeding, and thus effect that object. Repeated attempts were made to pass the hand, taking advantage of the most favorable periods of the patient's condition, but in vain. The pains continuing to return with great violence, the patient became extremely restless and almost frantic; an anodyne was administered, which had produced a state of repose when I arrived. On examination, I found the hand protruding, the shoulder pressed down within the pelvis, the head and side of the neck to the left side of the pelvis; the funis prolapsed and without pulsation; the os uteri dilated and relaxed; the external parts of the mother much swollen and very sensitive but not rigid; the uterine action occasionally pretty strong. I took advantage of the comparative state of quietude to attempt a delivery by the feet. I found the body of the uterus firmly contracted on its contents, but during each interval of pain was enabled to advance my hand a little. After an hour or more, I succeeded in laying hold of and bringing down a foot, which I secured. Finding there was

<sup>\*</sup> We regret that Dr. T's paper came to hand too late for our last number. We shall be pleased to hear from the doctor frequently.

no change of position of the shoulder or arm, and that it was altogether unvielding, as soon as my strength was somewhat repaired, I endeavored to bring down the other foot. I found the uterus more firmly contracted than before. My strength being much enfeebled from long continued indisposition, the uterine contractions so paralysed my hand and arm that I was unable to advance it without assistance, which at my request (Dr. LEE, the gentleman who had sent for me,) afforded, by holding my elbow and pressing it forward as I directed. I found as I advanced my hand, that the body of the uterus had completely accommodated itself to the form of its contents. The leg of the child was extended at full length; the uterus contracted longitudinally around it in an hour-glass form, was divided into two sacks, the upper containing the foot with the placenta, a complete ring being formed around the ankle. The contraction could be distinctly felt externally, the fundus of the uterus reaching the epigastrium. slowly and with difficulty insinuating finger after finger through this ring, it gradually yielded; the foot was brought down and secured as the other. In a short time the desired evolution took place, and delivery was effected. As soon as the hand passed above the stricture, the uterus contracted from its fundus, and the placenta joined together by a firm membrane, were immediately removed. Nothing unpleasant took place subsequently, and the patient continued to do well.

The presentation of the upper extremities is generally so hazardous both to mother and child, that every case of the kind affords something of interest to the profession. In this instance, the most important question which presents itself is the possibility or probability of delivery by the unaided action of the uterus; the irregular uterine contraction, the whole force of that organ being exerted laterally in opposition to its expulsive power; the irritation at the cervix tending to continue this state of things; the stricture on the leg of the child, together with the unyielding condition of the presenting part—all forbid the probability of such a result; but that delivery may take place with this presentation by uterine action alone, I can testify, whether by spontaneous evolution or whether the child was forced out in its doubled and

unnatural position, I am not able to say. DENMAN reports several cases of spontaneous delivery with this presentation, and witnessed them to have taken place by evolution or change of position, and was of opinion that practitioners should avail themselves of this knowledge to avoid the pain and danger which attends the operation of turning. Dr. Dewees has never seen a case of this kind, but says the testimony in regard to its sometimes occurring is conclusive. He mentions several cases as reported by others, and justifies us in considering it as a resource after all rational endeavors have failed. Dr. Collins, in a practical treatise, (published in Bell's Medical Library,) containing deductions from the result of sixteen thousand six hundred and fifty-four births, in the Dublin lying-in-hospital, under his mastership, during a period of seven years, states that no instance of this kind occurred. Dr. CLARKE, during his attendance in the same institution, in seventeen thousand nine hundred and twenty-two cases, gives the same report, except one case which is mentioned only on the authority of a midwife in the institution. From these facts, Dr. Collins thinks the occurrence of spontaneous evolution is so little to be expected, that in a practical point of view it may be considered almost fanciful. While I cannot consider the idea of a hope of relief in this way fanciful, I at the same time could not (except under peculiar circumstances,) look to it with any confidence for ultimate security to the patient; but this well founded conviction with practitioners generally, urging them to give opportune assistance, has no doubt given relief in many cases which would have resulted in this way. In regard to the shoulder, by the firm contraction of the uterus, being so tightly wedged in the inferior strait as not to permit the slightest motion upwards, Dr. Dewees says: "I will not say that this is never the case, but I must declare it seldom happens unless the proper time for acting has been lost." So far he has never met with a case in which he could not turn, where it was desirable, and then states, "that this perhaps has arisen from having been generally able to watch the proper moment for the operation." It is the testimony of every experienced and sensible accoucher, that the safety both of mother and child, requires him, in cases of this presentation,

to watch with the utmost diligence, for the earliest possible moment that he can succeed in turning. If from delay the extremity is forced too low in the pelvis, and the uterus become too firmly contracted on the body of the child to admit the possibility of such relief, we must endeavor to avail ourselves of the relaxing effects of blood-letting, opiates, &c.; and where the object cannot be accomplished by these means, and the child's life is destroyed by pressure, (which always ultimately occurs in such cases) instruments are speedily resorted to for the safety of the mother. It is not probable then that many cases of spontaneous evolution can occur, and no doubt this speedy and proper assistance presents the true reason why Dr. Dewees never saw an instance of this kind, particularly as he testifies that he never met with a case in which he could not turn when desirable. will also apply to Drs. Collins and Clarke, who in no instance waited for relief in this way. These gentlemen were not liable to the delay which country practitioners often experience. the neighborhood in which I reside, the poorer classes, and the negroes, of which there are large numbers on almost every plantation, seldom seek the aid of a physician until a perfectly ignorant old woman who generally has the management of such cases, becomes alarmed and asks for advice. The majority of these women, totally unacquainted with any difficulty that may arise, and judging of danger only by the length of time the victim of their ignorance has been in torture, will probably wait in all cases twenty-four hours or more, the efforts of nature; and if a physician is then sought, his distant residence or his absence when sent for, may sometimes extend it to a still longer period. Considering these circumstances here or elsewhere, it is not difficult to understand why the experience of one so situated should not accord with those whose location, &c. brings them in proper time to the bed-side of the patient; and we may readily credit the fact that he may occasionally, or at least in one instance, meet with a case where turning could not be deemed practicable by any pru-The following is a case in point, which confirms the experience of DENMAN and others, that in this presentation, nature will sometimes, unaided, effect a delivery, and makes it

conclusive that we are justified under some circumstances in considering the propriety of delay even in this most perilous condition, but I am satisfied we should never indulge such a hope except where the pelvis is very large and well expanded, or the child very small. On the 29th of April, 1838, I was called to Mrs. W——, the wife of an overseer on one of the plantations in my neighborhood, who had been in labor during the preceding evening and night, under the management of an ignorant woman. On examination, I found the child's shoulder forced low and firmly impacted in the pelvis; the hand and arm protruding, much swollen and livid; pain almost constant; the uterus firmly contracted on its contents, so that the presenting part did not yield in the least to pressure; indeed, it was perfectly immovable. The mother's pulse was feeble and very much hurried, but the uterine action continued most violent. I at once judged the only hope of relief to consist in lessening the body of the child by perforation. An experienced medical friend being near, I sought his assistance. He agreed with me exactly in regard to the deplorable condition of our patient, and expressed a doubt whether she could survive long enough for us to procure obstetrical instruments, which were not at hand. While we were expressing our views and sympathies, the midwife came from the adjoining room, and announced the safety of our patient. The child was delivered without aid, but whether evolution took place or whether the child was forced out doubled up on itself, I cannot say, as I was not in the room at the moment it was effected. The child was at the full period, large, and somewhat swollen. The capacity of the pelvis was very great. The woman was of a healthy, vigorous constitution, and convalesced speedily. She had given birth to several children previously, and has also to one since, without the slightest difficulty.

## CASE OF CLOSURE OF THE OS UTERI,

WHICH REQUIRED AN OPERATION. BY T. R. PUGH, SALEM, FAUQUIER CO. VA.\*

To the Editor of the Maryland Medical and Surgical Journal. Six—Having recently met with a case of closure of the os uteri which required an operation, and which seems to be somewhat uncommon in this country, I would like to see it published in your valuable Journal.

The following is a correct account of the case: Mrs.—sent for me about the 10th of June; when I saw her, she appeared to be suffering from an attack of dysmenorrhæ; but upon enquiry into the history of her complaint, she informed me that she had not menstruated for two years, neither had there been a discharge of any kind from the uterus since she had her last child, about two years ago. The usual remedies for dysmenorrhæ were tried without effect. An examination per vaginam was made, which confirmed my former impression; but fearing I might be mistaken, I requested Drs. Peyton and Withers to see her. The former gentleman saw her and made repeated examinations, and was decidedly of my opinion. As there seemed to be considerable enlargement about the abdomen, and her symptoms became alarming, we agreed to puncture the uterus, as affording the only hope of recovery.

I performed the operation on the 22d June, in the presence of and assisted by Dr. Peyton, in the following manner, viz: I introduced a common middle sized scalpel wrapped with fine calico upon the index finger of the right hand to the point or indentation left by the closure of the os tincæ; then seizing the handle of the instrument beyond the os externum, I gently forced it through the coats of the organ; the instant it penetrated the organ, a gush of fluid took place, which was followed by relief, after discharging about two pints. I introduced a tube, which remained in about

<sup>\*</sup> This communication also came to hand too late for our last number. We hope to hear from the doctor frequently.

twelve hours; upon removing the tube, about two pints more escaped. I then substituted a gum elastic catheter, which remained in (except occasionally removed) until the wound was healed and orifice formed. She recovered her health rapidly, and has continued well except a mild attack of leucorrhæ. Menstruation regular since.

She informs me that during her two years in that situation, she had never escaped her monthly period without suffering severe pain, and sometimes vicarious discharges from the anus or lungs.

It seems also that immediately after the delivery of her last child, she was attacked with inflammation of the neck of the womb, which terminated in closing up the neck. Lochia never appeared.

Such is a correct statement of the above case, which Dr. Pev-TON will also attest.

Yours, &c.,

T. R. Pugh.

SALEM, FAUQUIER Co., VA.

### ANALYSIS OF A CALCULUS

FROM THE STOMACH OF A HORSE.

BY WILLIAM E. A. AIKIN, M.D., PROF. CHEM. AND PHARM., UNIV. OF MD.

Some months since, a friend placed in my hands an intestinal concretion, one of eight or nine which had just been removed from the stomach of a horse that had suddenly died. From the number and the size of the calculi, they had evidently produced death by their mechanical action. The one in question was very near the size and shape of a goose's egg, of a light ash color, and when sawed across, exhibited the usual concentric, radiated layers, the nucleus being a small particle of iron. On inquiry, I found the animal had been employed about a mill, had received the usual care, and had been fed on the usual mill feed. Such being the history of the case, my curiosity induced me to make an analysis of the calculus, in order to ascertain whether its composition would throw any light upon its formation; whether it was at all analagous to the urinary concretions, and thus somewhat independent in its formation of the nature of the food, or whether it was a mere mechanical aggregation of foreign matter taken into the stomach with the food. The result will be gathered from the steps of the analysis. The portion examined was obtained from the face of the surface exposed by sawing the mass in two, and included a portion of each concentric layer.

- (1) One hundred grains were placed in a bulb connected with a tube containing chloride of calcium, the tube and contents having been previously weighed; and heat was then applied carefully and gradually to the bulb to expel any water that might be present. Subsequently, upon weighing the chloride, it had gained exactly forty-one grains in weight, showing the presence of forty-one per cent. of water.
- (2) Another hundred grains were ignited in a platina crucible, and kept at a red heat for a few moments to insure the decomposition of any organic matter present. When cooled and weighed, the

hundred grains had lost fifty-three grains, equal to forty-one per cent. of water, and twelve per cent. part organic matter obtained from the liquids of the stomach in which the concretion had been immersed while forming, and part carbonic acid, as will presently appear.

- (3) Another hundred grains were placed in a tube, and muriatic acid slowly added, until, aided by a gentle heat, a complete solution was obtained of every thing soluble. The insoluble residuum, after having been separated by the filter, and again digested with muriatic acid I called silex. When washed, dried and weighed, it gave three and a quarter grains.
- (4) The filtered and acid solutions were then precipitated by means of Aq. ammoniæ, which threw down all the alumina as a bulky gelatinous precipitate. This, washed, dried and ignited, to expel water, weighed forty-two grains.
- (5) To the liquid filtered from the alumina, I added a solution of oxalate of ammonia, and obtained a precipitate of oxalate of lime, which washed and dried with gentle heat, weighed three and four-tenths of a grain, and, from its atomic constitution, must have contained one and sixteen-hundredths of a grain of lime.

The liquid filtered from the oxalate of lime, was then evaporated to dryness in a platina cup until all the ammoniacal salts had been driven off. The pellicle adhering to the crucible was treated with a few drops of sulphuric acid; the resulting solution, which must have contained all the magnesia, if any had been present, was then evaporated to dryness; the product was, however, too minute to be weighed, and indicated a mere trace of magnesia. Such being the case, I did not subject the precipitated alumina obtained in another stage of the process, (4) to any examination for adhering magnesia. To determine the condition in which the lime existed, I introduced twenty grains of the powdered calculus into a small bulb, and placed the bulb with a small flask containing a sufficient quantity of muriatic acid in one pan of the scale beam, and after adjusting the counterpoise, poured the acid into the bulb, as in the common process for the analysis of marls. The loss of weight, owing to the escape of carbonic acid, was one-fifth of a grain, which would be equal to one grain in the

hundred. This loss was somewhat greater than should have occurred, and can perhaps be explained by supposing a simultaneous escape of a small portion of aqueous vapor.

The lime found (5) requires, by the law of definite proportion, a little more than 0.91 grs. of carbonic acid to convert it into carbonate of lime. Assuming the smaller to be the true quantity of carbonic acid, the lime 1.16 gr., and the acid 0.91 grs., would yield 2.07 grs. of carbonate of lime. I should have mentioned that the alumina (4) was slightly colored, undoubtedly by iron furnished from the ferraginous nucleus. From these details we can gather the composition of the calculus:

Water,	41.
Alumina,	42.
Organic matter,	11.09
Silex,	3.25
Carbonate of lime,	2.07
Magnesia and iron a trace.	
Loss,	.59

100.00 grs.

The very large proportion of alumina present I conceive may be explained by the readiness with which that earth becomes converted into impalpable powder; whence, in the earthy matter adhering to the food or suspended in the drink of the animal, this would predominate over any of the other earths not so readily pulverised. The origin of the concretion being, as I conceive, thus clearly established by its composition, it becomes an interesting question to determine whether any care will prevent similar formations in other cases. How long the life of the animal whose death has given occasion for this communication, might have been prolonged, and how many more years of active service might have been obtained, by different treatment, no one can certainly say; but one thing is certain, this violent death might have been avoided, and the chances for long life might have been incalculably increased, if the foreign matter which produced death could have been kept out of the stomach. The diseases to which horses are subject are so numerous and so complicated,

and often so fatal, that the dictates of humanity should urge all to leave nothing undone that can contribute to their comfort. Or, should any one be found deaf to the voice of humanity, the promptings of self-interest may persuade them that nothing can be lost, while much may be gained, by a little attention to seemingly trifling matters. It seems hardly possible that the horse feed, as it comes from the bolting cloth, can contain any very large per centage of earthy matter; and there is apparently no good reason why it may not be thrown into the manger as clean as it is furnished by the mill stones. Imperfectly cleaned grain, hay loaded with soil and turbid water, should all be considered as unfit to be given to any beast that is worth feeding at all. The mere presence of foreign matter in the food, is not, after all, sufficient in itself to account for the formation of these calculi, or they would be of more frequent occurrence. Some peculiar condition of the stomach seems necessary. What that condition is, must be left for the scientific veterinary surgeon to determine. It will be safest to assume, that a tendency or predisposition for the formation of such deposites exists in all cases, and then as far as possible, to guard against furnishing the material.

#### REMARKS ON THE

### INTERMITTENT AND REMITTENT FORMS OF FEVER.

BY JNO. F. PETHERBRIDGE, M.D., OF ANNE ARUNDEL COUNTY, MD.\*

HAVING had, for some years past, considerable experience in the treatment of the intermittent and remittent forms of fever, and having, with uniform success, pursued a course somewhat different from the one generally adopted, I have thought it might not be altogether uninteresting to the readers of the "Medical and Surgical Journal," to see a brief statement of the plan which I have followed.

In order that the subsequent remarks may be fully appreciated, I would premise that my practising district embraces the lower part of Anne Arundel and the upper part of Calvert counties. A single glance at the map will give a clear idea of its geographical situation. It will be seen to constitute a part of the narrow strip of land running down between the Chesapeake bay on the one side, and the Patuxent river on the other. Thus located, it might be presumed that the situation would be sickly, especially during the autumnal months. And such was the case to a very great degree some ten or fifteen years since. But, owing to the changes which have taken place in the general face of the country, and the alterations which have been effected in the habits of the people, the health of the locality has improved so much, that we do not at this time consider it by any means a sickly one; or at least not near as much so as others similarly exposed.

The diseases with which we have to contend, are those which generally prevail in alluvial situations. For it will be borne in mind that a large portion of our lands is of this character. In the summer, we have diarrhea, dysentery, and all the modifications of bowel complaints; in the fall, commencing the middle or

<sup>\*</sup>This article also came to hand too late for our last number. We shall be pleased to hear from our friend, the doctor, frequently.

the last of August, and continuing until the first heavy frost, and for ten days or a fortnight afterwards, we have the whole tribe of diseases which have been generally supposed to owe their origin to malaria, the intermittent, remittent and the well-defined congestive fever; and scarcely have these disappeared from amongst us before winter introduces the pneumonia biliosa, a disease which, with us, requires almost as much skill and energy as the congestive fever itself.

But it is, as the caption of our article indicates, upon the intermittent and remittent fever, we propose to offer a few remarks.

Thoroughly educated in what may with propriety be designated the calomel school; taught to believe that the liver is the great source of all the diseases to which mortality is heir, and that calomel is the catholicon by which they are to be overcome, we commenced our professional career, with strong prejudices against every thing that savored of the Broussaic school. But we had been practising but a short time, before we were convinced that however applicable the views we had learned might be to diseases of other climates, they were entirely unsuited to the diseases with which we had to contend. The red tongue, the incessant retching and vomiting, the insatiable thirst, with the tenderness and pain of the epigastric region, so clearly designated the stomach and not the liver as the seat of disease, that the most obtuse intellect could not possibly misunderstand.

But perhaps it is proper to remark here that we have been informed by physicians of great skill and observation, that it has only been since the passing of the cholera through the land, that our fall diseases have assumed a gastric character; that prior to that period, they were entirely different from what they now are, in their pathological indications; and that no form of treatment so rapidly arrested them in their progress, and so successfully relieved them as hydrar submurias in large and repeated doses. So different is the state of things at present, that but for the entire confidence we have in the judgment and the representations of these gentlemen, we could scarcely give credence to an assertion of this character; for we positively aver that in the hundreds of cases which have fallen under our observation, we have never

found it necessary in a single instance to resort to this mode of procedure. But viewing them as consisting in gastritis or at most in gastro duodenitis, we have adopted therapeutics in accordance with the same.

If we can see our patient in the early stage of the disease, we invariably bleed during the period of excitement, after which we apply from ten to fifteen cupping glasses over the region of the stomach, duodenum, &c., abstain from all medicines, direct our patient to eat ice "ad libitum," and with the view of extinguishing the excitement as rapidly as possible, we have vessels filled with ice, placed under the hands, so that he may freely play with the same. By these means, we pretty generally succeed in converting what would otherwise be a remittent into an intermittent, and thereby secure to ourselves a more favorable opportunity than we otherwise could have, for the administration of the agent upon which we place our chief reliance in arresting the progress of the disease. It should have been remarked that our remittents almost invariably assume either the simple or the double tertian form; the latter most generally. And if the paroxysmal character of the disease is not overcome, the patient will soon have a dry, chapped tongue, constant fever, great prostration of strength, a low, muttering delirium, and the whole train of symptoms constituting what has been called the typhoid state. prevent this truly deplorable state, the materia medica, in furnishing us with quinine, gives us what approximates as nearly to a specific as it is possible for us to find in the science of therapeutics. But, unfortunately, the intrinsic value of this agent has seldom been fully appreciated, on account of the manner and the quantity in which it has been given. It is true that frequently in the dose of two and three grains every two or three hours, it will suffice in the mild intermittent. But when the disease is one of considerable violence, and where there is danger of the anticipated paroxysm, placing the patient almost if not entirely beyond the reach of the science, such a course is for all the world as was wont to be said by the professor of the theory and practice of medicine in the University of Maryland, like attempting to beat down the rocks of Gibraltar with the grains of mustard

seed. Here, if we would rescue our patient, if not from the grave, at least from a long and protracted illness, the remedy must be prescribed in the dose of fifteen or twenty grains. And from years' experience in thus administering it, we hesitate not to affirm that all who will thus prescribe it, will never be induced to abandon the course. This, then, is the plan we pursue, if the disease is one of considerable mildness, and the return of the paroxysm or the excerbation is not expected for some time after the use of our depletory remedies, we direct a mild laxative. But if the disease is one of violence, and the paroxysm or the exacerbation is expected in the course of three or four hours, we never concern ourselves about unloading the bowels, but direct our efforts to the destroying of the periodicity of the disease. And not until after this has been accomplished, do we administer some mild aperient. We are convinced that the routine practice, of purging the patient for days before administering the quinine, is radically wrong. In every instance it keeps up the irritation upon the gastro enteric membrane, and by debilitating the patient, only renders the system more liable to the recurrence of the disease. If the physician can see his patient during the excitement of the first paroxysm, and will freely use his lancet, his cups and ice, and four hours before the expected return, will administer the tonic in doses of twenty grains, in a large majority of cases -at least eight out of ten-it will be unnecessary for him to combat with the second. He will have the satisfaction of cutting short, in a few hours, a disease, which, under a different mode of treatment, would require his attention for one, two, three weeks or more, and then have the mortification of seeing his patient with a salivated if not a sloughed mouth.

With propriety the question may be asked, if the administration of so large a dose of quinine is not directly at variance with the pathological views laid down? If the stomach is in a state of inflammation, will not this agent have a direct tendency to increase the same? Reasoning "á priori," would conduct us to such a conclusion. But such, however, is not the case. Vividly is the recollection upon our mind, when we were induced for the first time to make the experiment. The individual had been sick

for some time; the case was rapidly passing into the typhoid state; the dry, red, glazed tongue—the certain precursor of this state—was before our eye; and the certainty that the next paroxysm would either result in death, or render the case almost unmanageable, compelled us to make an effort to prevent its return. The tonic was administered, and, to our inexpressible delight, the disease was arrested, and in a short time our patient was convalescent. Since then, we have invariably, after the abstraction of blood, either generally or locally, or both, directed the tonic to be taken; and if we can succeed, as we generally do by the administration of a scruple dose, four hours before the expected paroxysm, in producing the buzzing in the ears—tinnitus aurium -which characterizes the full effect of the agent, we feel per-We are assured from repeated observations, that fectly safe. with this sensation, there will be a profuse perspiration, indicating an entire breaking up of the diseased action.

We would remark that we prefer giving the quinine in solution, and instead of using the elixir of vitriol for the purpose of suspending it, we use one of the vegetable acids, generally the tartaric. We dissolve the twenty grains in a tablespoonful of water, and add the dry tartaric acid, until the solution becomes transparent. We prefer the vegetable acids as being less irritating in the event of their being slightly in excess; indeed, when we cannot get a distinct intermission for the administration of the tonic, and have to give it during the remission, we prefer making the solution slightly acidulated.

Sometimes it is the case, the paroxysm or the exacerbation comes on an hour or two sooner than was anticipated, and not being able to foresee this, the quinine has not been administered sufficiently early to produce its specific influence in time, in this case the second paroxysm is developed; but by guarding against it at the next period, by giving the tonic sufficiently early to produce the tinnitus aurium, we at once put a stop to it. As before stated, from three to four hours is the period we prefer.

Briefly, and in a desultory manner, such is the course we pursue in the treatment of these diseases; and we have the satisfaction of knowing that of some hundreds of cases including the in-

termittent, remittent, and the congestive forms, we have never lost but a single case of bilious fever.

In conclusion, we propose to subjoin one or two cases illustrative of our views. Numbers might be added, but as the treatment and the results were precisely the same, it is unnecessary to extend our paper.

CASE I.—Sept. 21. Called to day to see my estimable friend, Dr. Hammond Stewart. He informs me that he has been sick for nearly a week; at present, he is in the cold stage of the disease; suffers excruciatingly from the chill; violent pain in the back and head; retching and vomiting, with insatiable thirst; after waiting for an hour, the reaction developed itself; bled him freely from the arm; directed ice to be used ad libitum; absolute diet, and abstinence from all medicines. Anticipating a return at ten or eleven o'clock the next day, we left from twenty to twenty-five grains of quinine, with directions for it to be administered at one dose.

Sept. 22. Visited him at half past ten, A. M. The fever had continued nearly all night, notwithstanding the bleeding and the ice, but at six in the morning, having an apyrexial period, took the tonic; find him free from fever, and in a profuse perspiration from head to foot. This is an effect which I have almost invariably seen to follow large doses of quinine after depleting the system. He sensibly experiences the roaring in his ears. We feel confident from his present state that he will have no return.

Sept. 23. No return of the paroxysm; bowels being constipated, prescribed a laxative; on account of the smallness of its bulk, he preferred a blue pill.

Sept. 24. Found him riding out upon his farm.

CASE II.—Sept. 18. Called in consultation to visit Mrs. W——, ætat. from fifty to sixty. Informed by her physician that she had been sick for nearly a week. Her disease was a double tertian. Calomel and the agents generally employed, had been freely used, but without avail. She was becoming more and more prostrated; tongue red and dry; great thirst. It is now eleven o'clock A. M.; at two P. M., she expects a return of the paroxysm. She is entirely too weak to lose blood from the general system.

Cupped her over the epigastrium; applied an epispastic, and administered from fifteen to twenty grains of quinine dissolved as before stated. At one P. M., she began to hear the buzzing in her ears, perspiring freely throughout the whole system.

Four, P. M. Missed her paroxysm; confident from the specific influence of the agent having been produced, that there will be no return unless she expose herself, we took our leave, not intending to return. A few days afterwards, we saw her physician, who informed us that she had so far recovered as to render his visiting unnecessary.

In both of the above cases, the quinine was administered during an intermission; but the following will show the propriety of the course, not only when an intermission cannot be obtained, but also under circumstances which would appear positively to contra-indicate it.

CASE III.—August —. Called to see Miss S. K ——, ætat. about nineteen; a slender form and bilious temperament. Having some time previously exposed herself to the vicissitudes of the weather, she had contracted what is commonly designated a bad cold, attended with a violent pain in the breast and a distressing cough. A few days since, she was attacked with a severe chill, ever since which she has been suffering from a burning fever; complains of violent pain in the back, head, and breast. slightest pressure upon the epigastrium produces pain; the pulse is full, strong, and frequent; with the exception of a slight glaze, the tongue with propriety might be compared to raw beef. Her thirst is so great, no quantity of ice will satisfy her. Bled about twenty ounces from the arm; cupped freely over the stomach, duodenum and breast, directed the free use of ice both externally and internally. Oleum Ricini z j. Upon visiting her the next morning, found that upon the whole she had passed a comfortable night, but still a great degree of excitement in the system. willing to administer the tonic while the fever continued, directed the continued use of ice, hoping to be able to subdue the same; left from fifteen to twenty grains of quinine to be given in the event of any thing approximating to an intermission. But upon visiting her the following morning, was informed, that shortly after I had left,

the fever had increased, and had continued to rage until a few hours previously, when it appeared to abate a little. She was evidently succumbing under the force of the disease; and as the presumption was that she was now freer from fever than she would be during the day, I determined to delay no longer. quinine was given; no exacerbation came on during the day. next day she was nearly if not entirely free from fever. From this time she began to amend. The pulmonic symptoms gradually subsided, and with the exception of an occasional laxative, no other medicines were used. Perhaps some may be disposed to doubt the propriety of administering the tonic in a case so violent and so complicated as the above. The result proved the correctness of the course; and it is our decided opinion that under any other treatment the case must have terminated fatally. We close by giving it as the opinion which we have deduced from multiplied observations, that quinine is not the stimulant that it has been generally supposed, and that in the remission of fevers, signal benefit will result from its exhibition in large doses, if the system has been prepared for its reception.

BRISTOL MANOR, ANNE ARUNDEL COUNTY, MD.



### HOSPITAL REPORTS.

### REPORT OF THE LUNATIC DEPARTMENT

OF THE

### BALTIMORE ALMS HOUSE:

PRESENTED TO THE BOARD OF TRUSTEES, DECEMBER, 1840.

BY A. C. ROBINSON, M.D., ONE OF THE ATTENDING PHYSICIANS.

### Gentlemen:

The arrival of the period appointed for your annual Report of the Condition and Conduct of this Institution—benevolently designed for the accommodation of the poor of our city and county—has suggested the propriety of presenting the accompanying statement relating to the insane inmates. To its various particulars your attention is solicited.

This communication is laid before you, in full confidence that you will regard it as entirely consistent with our relations to you in your official capacity, and as alone dictated by a sense of duty to that unfortunate class of our fellow beings whose mental wants should command public sympathy and care, at the same time, that their bodily necessities are supplied at the public expense.

You will all probably coincide in the opinion, that the insane department is the only portion of this institution calculated to produce other than grateful impressions upon benevolent minds.

From the want of a more suitable place for the accommodation of pauper lunatics, they are necessarily transferred into the alms house—consequently, we have here presented to us the melancholy spectacle of cases of nearly all the varied forms of mental disease crowded in unclassified confusion. Yet most of the sufferers give some evidence, that high mental and moral attributes still linger about them, penetrating the gloom—"beams of original light, of which the mind amidst its thickest darkness is never shorn," which seem to dwell even in "the dark grandeur of the soul" of the raving maniac.

It is a well known fact, that the insane are often possessed of astonishing strength. This they are neither able properly to direct or control. It therefore becomes necessary that they should be deprived of facilities for escape, or opportunities of injuring themselves or others. Moreover, although medical skill is very important in the management of the peculiar disorder of their nervous systems, it is no less necessary that, when confined, their apartments should be well warmed, lighted and ventilated; their personal comforts studiously regarded, and their morbidly sensitive minds gently checked and soothed by experienced, intelligent attendants, whose "considerations of convenience" should always be subservient to the probabilities of cure. architectural unfitness of this building for the accommodation of lunatics need not be argued. It was not originally designed for their habitation, and does not now afford the means of either secluding or classifying them, according to the intensity or peculiar features assumed by their maladies.

This Report is made with the hope, that you will agree as to the necessity and propriety of again urging upon the city and county the cruelty of that false economy, which still refuses to take measures to place our insane poor where the architectural arrangements are so suited to the accommodation of lunatics, as to permit any advisable classification of the patients—while its internal arrangements afford humane, watchful, and capable nurses, with such appropriate amusements and occupations for the insane, as when aided by medical skill may prove promotive of their comfort and cure.

### TABLE I.

SHOWING THE

# NUMBER, WITH THE AGES, PERIOD OF ADMISSION AND CONFINEMENT, PRESENT CONDITION, &c.

OF THE

## INSANE WOMEN.

HEREDITARY, PERIODICAL, PAROXYSMAL; with Remarks.	Not improved Do noisy; inoffensive; confined to cell.* [in the yard.*  Increased Periodical; harmless; escaping, if permitted; confined to cell.*  Not improved. Do do do do cheerful.*  Hereditary; chained in cell; paroxysms of ungovernable violence.*  Not improved. Increased Increased raving; abusive; defying coercion; chained to cell.*  Not improved. Inoffensive; silent; quiet; confined.*  Not improved. Inoffensive; silent; quiet; confined.*  Not improved. Do do do do cheerful; confined.*  Inoffensive; guiet; escaping, if allowed; confined.*  Inoffensive; quiet; confined in her cell.*  Inoffensive; quiet; confined to her cell.*
RECENT OR PERIOD OF CONDITION CHRONIC; CONFINE-AT PRESENT.	Not improved  ""  Increased  "  Increased  Not improved.  " " " " " " " " " " " " " " " " " "
PERIOD OF CONFINE- MENT.	<b>—</b>
RECENT OR PERIOD OF CHRONIC; CONFINE-WHEN rec'd.	Recent Chronic Recent Chronic s Recent Dev. sub't Chronic
SUPPOSED CAUSES.	Disappointed affection  Loss of property Intemperance.  Masturbation. do and domestic unhappines Indulgence of passion and pride Epilepsy and do Intemperance and opium. Domestic unhappiness. Poverty and grief. Indulgence of passion. Religious perplexity. do Domestic trouble. Religious perplexity. Domestic unhappiness. Domestic trouble. Religious perplexity. Domestic unhappiness. Domestic unhappiness. Domestic unhappiness. Domestic unhappiness. Domestic unhappiness.
MARRIED OR SINGLE.	
T. Age	1839 36 1840 39 1840 39 1826 47 1836 25 1839 39 1838 44 1840 63 1840 63 1840 63 1840 63 1840 63 1840 63 1840 63
PERIOD OF No. ADMISSION. Age	Aug. 1839   Single   Sept.   68 Married   Shoc. 1840   39 Single   66 Married   5 Dec. 1826   17 Midow   6
II Z	+ ########

Recent   5y 7m   Not improved. Inoffensive; quiet; confined to her cell.*  Chronic   1	Confined to bed by debility; marasmus; nearly idiotic. Inoffensive; confined to cells.*	Do do to bed by debility.  Do do to cells.*	Do daily at work.  Do do do imagines herself "Queen Mary."  Virilant, and destructive during periodical attacks; chained.*		During paroxysms of violence, destructive and noisy; chained.*  Do do do do do do Harmless: confined to her cell.*	Do parox's of grief at absence from her children; con. to cell.* Constant raving: quarrelsome; destroys clothes, &c. chained.*		Do requiring to be confined to her cell; labors.
Not improved.	33	3 3	" " Improved	33	Not improved.	Thereased	Not improved.	: "
7m	22	600	7 [ [	·	11 %	119	ა დ. <del>4</del> დ	0 0
2 1 5		(	<u> </u>		4 -	4	27	-
nt nic			-4-	,	1	<u> </u>		
Recent Chronic	3 3	2 2	« « Recent	33	ee ee TTnl-nown	Chronic	Chronic Recent	Chronic
	Unknown		Disappointed affection					
	" Unknown		Disappointed affection					
	3 3	Widow	Disappointed affection		Single Disappointed affection		Married Religious perplexity	% Puerperal

White women, twenty-eight; colored women, twelve; total number of women, forty.

\* Capable of labor; unemployed; constantly complaining of the confinement; escaping, if released. † A sister of the preceding patient. Their brother was formerly an insane inmate of the house.

### TABLE II.

SHOWING THE

# NUMBER, WITH THE AGES, PERIOD OF ADMISSION AND CONFINEMENT, PRESENT CONDITION, &c.

OF THE

## INSANE MEN.

HEREDITARY, PERIODICAL, PAROXYSMAL; with remarks.	Chronic (18   Not improved.) Inoffensive; inactive; nearly idiotic; unoccupied; hereditary.  Recent (2   2   2   2   2   2   2   2   2   2
RECENT OR PERIOD OF CONDITION CHROMC; CONFINE-When rec'd. MENT. AT PRESENT.	Not improved.  """ """ """ """ """ """ """ """ """
ERIOD OF ONFINE-	18 18 18 18 18 18 18 18 18 18 18 18 18 1
20	
RECENT OR PERIOD OF CHRONIC; CONFINE-When rec'd. MENT.	Chronic yrs  " Recent 2 " Chronic 19 Recent 1 " Chronic 1 Recent 1 " Chronic Recent 1 " Chronic Recent 1 " Chronic Recent 1
SUPPOSED CAUSES. CHRONC; C When rec'd.	Unknown.  Domestic grief and loss of property Unknown.  Loss of property entrusted to him Intemperance and poverty.  do and paralysis.  Masturbation.  do Distress from imprisonment.  Absence from his native country. Intemperance.  do and poverty.  Absence and epilepsy.  Unknown.  Intemperance and epilepsy.
	Unknown.  Domestic grief and loss of property Unknown.  Loss of property entrusted to him Intemperance and poverty.  do and paralysis.  Masturbation.  do Distress from imprisonment.  Absence from his native country. Intemperance.  do and poverty.  Absence and epilepsy.  Unknown.  Intemperance and epilepsy.
MARRIED SUPPOSED CAUSES.	Unknown.  Domestic grief and loss of property Unknown.  Loss of property entrusted to him Intemperance and poverty.  do and paralysis.  Masturbation.  do Distress from imprisonment.  Absence from his native country. Intemperance.  do and poverty.  Absence and epilepsy.  Unknown.  Intemperance and epilepsy.
SUPPOSED CAUSES.	Unknown  Domestic grief and loss of property Unknown  Loss of property entrusted to him Intemperance and poverty.  do and paralysis.  Masturbation  do and paralysis.  Absence from his native country. Intemperance  do and poverty.  Absence from do and poverty.  Intemperance  do and poverty.  Intemperance  do and poverty.  do and poverty.

Unfit for labor.	Harmless: timid: noist: naroxvsms of uncovernable nassion *	Homicide: naroxysms of uncovernable passion: shained *	Inoffensive: allowed the range of the ward: infim	Homicidal: suspicious: unsociable, chained in his coll *	Inoffensive: nearly idiotic.	Do noisy: able to labor: unemployed	Do silent: do do do	S: n	Do do do do do do	Do labors.	Melancholy, Jahors		Morose: naroxvems of dangerous molence: abained *	"Do do	Harmless: noisv: confined.*	Quarrelsome: homicidal: chained in his cell *	Do do do do *
Not improved.	, , , , , , , , , , , , , , , , , , ,	99	×	3	3	3	99	Much improved	1 33	Not improved.	, , , , , , , , , , , , , , , , , , ,	Improved	Not improved.	33	33	33	33
rs Im	က	81	67	_	11	11	4	20	Ø		က	က	9	6	1		_
wn urs 1m	t 1	5 2	1 2	1	2 4 11	vn 6 11	6 4	2	87	01	9	က	9	ic 4 9	t 1	ic i	f 1
Unknown urs 1m	Recent 1 3		1 2	. 1	Chronic 4 11	Unknown 6 11	6 4	2	87	01	Recent 3	en	9 "	Chronic 4 9	Recent 1	Chronic 1	Recent 1
Intemperance	of temp	do and ment, excitement " 5 2	Intemperance	The loss of a law suit	Epilepsy Chronic   4 11	Disappointed affection Unknown 6 11	6 4	20	87	Chronic 2	Intemperance Recent 3	do d	op	Unknown	Intemperance	Epilepsy Chronic 1	Distress at imprisonment Recent
	of temp	" do and ment, excitement " 5 2	Married Intemperand	" The loss of a law suit "		Disappointed affection	6 4	2	87	Chronic 2	Married Intemperance	op ,	op	Unknown	Intemperance	Married Epilepsy Chronic 1	" Distress at imprisonment Recent 1
	of temp	335/41 " do and ment, excitement " 5 2	Married Intemperand	" 29 " The loss of a law suit " 1 1		" Disappointed affection	" Inflammation of the brain Chronic 6 4	" Intemperance Recent 5	, do do 2	Chronic 2	4057 Married Intemperance Recent 3	op ,,	op	Unknown	Intemperance	" 47 Married Epilepsy Chronic 1	"   32 "   Distress at imprisonment Recent   1
19, Nov. 1840, 30, Single, Intemperance, Unknown, wrs 1m	of temp	21 Oct. 1835 41 " do and ment, excitement " 5 2	Married Intemperand	23 Nov. " [29 " The loss of a law suit " 1 1	1835 29 Single	" Disappointed affection	" Inflammation of the brain Chronic 6 4	" Intemperance Recent 5	, do do 2	Chronic 2	30 Aug. 1840 57 Married Intemperance	op ,,	op	Single   Unknown	Intemperance	" 47 Married Epilepsy	36 " "   Distress at imprisonment Recent 1

White men, 29; colored men, 7; total, 36.

\* Capable of labor; unemployed; constantly complaining of the confinement; escaping, if released.

Note.—When referring, in the preceding Tables, to a patient's being "capable of labor," we have alluded alone, to the physical condition not forbidding bodily exertion. We have done this, with the view of attracting attention to what we believe to be true, viz. that could such patients as still remain, have been early placed in some auspiciously conducted Lunatic Asylum, their mental derangement would have been so far cured, or ameliorated, that a large proportion of them might have been greatly benefited, and rendered happy by being daily engaged in some appropriate and interesting labor.

We also esteem it proper to remark, in explanation of the modes of personal restraint, we have stated to be used in some cases—that as the arrangements of the

building present few barriers to the escape of patients, and as our nurses are selected from among the temporary inmates of the house-few of whom can be expected to possess those qualities of mind and manner, with that experience and appreciation of their arduous and peculiar duties, which combine to form an accomplished devoted to the management of mental disease,—and as there are only fourteen small rooms appropriated to the insane women, and twelve to the men,—two, three, or more, are necessarily placed in the same apartment, and "chains," or some other form of personal restraint, seem to be rendered imperative to protect both courageous and proper nurse, for an insane individual—and as no other than the "coercive system" of treatment can be pursued, except in an Institution exclusively oatients and nurses.

In our remarks, we have also referred to the fact of a patient being "unemployed," because we design dwelling upon the injurious influence of continued idleness, and the great value of labor and interesting occupation in the treatment of the varied forms of Intellectual and Moral Insanity.

### SUMMARY.

NUMBER OF	FATIENTS.
Females40 C	ecent when admitted38 hronic when admitted33 eveloped subsequent to admission 2 nknown3—76
DURATION OF THEIR CONFINI	
Less than one year	
From one to five years	
From ten to twenty years	
From ten to ewency years	
OCCUPATIONS OF THE MEN.	FOREIGNERS.
Tanner 1	Irish10
Sailor 1	Germans 6
Brushmaker 1	Italians 2
Tinner 1	Swiss 1
Stage actor 1	English 1—20
Shoemaker 1	Citizens of other States 11
Plasterer 1	" of Baltimore county13
Farmers 2	of Baltimore city 9
Artists	Other parts of Maryland21
Merchants         4           Carpenters         5	Unknown
Laborers16—36	Total
admoreting the second s	20002, , , , , , , , , , , , , , , , , ,
AGES OF LUNATICS, DEC. 1840.	SUPPOSED CAUSES.
Under 20 years 1	Intemperance23
From 20 to 30 years17	Domestic afflictions 4
" 30 to 40 "27	Epilepsy and ill health 6
" 40 to 50 "16	Religious fanaticism, perplex-
" 50 to 60 " 7	ity,&c(all females) 6
" 60 to 70 " 5	Disappointment, or loss of pro-
" 70 to 80 " 3—76	perty 3
	Disappointed affection 5
The youngest male is 19; oldest	Indulgence of temper and pride 3
male 70. The youngest female is	Puerperal3
22; the oldest female 80.	Produced or perpetuated by
Single, forty-seven; married, twen-	masturbation
ty-six; widows, three; widowers, —	
	Imprisonment
	OHAHOWIL

We have thus displayed the present actual condition of the insane department of the alms house. We believe the preceding tables to be accurate. They have been hastily prepared, and with considerable labor; no distinct or similar record of the insane paupers having heretofore existed, it was necessary to collect the materiel from various sources. They have been added with the hope of lending interest to the subject, and affording tangible and legitimate data for prompt action.

Heretofore, every practicable scheme to promote the comfort of these unfortunates—consistent with the purposes and arrangements of the house, as a general asylum for the poor, in which point of view it will bear comparison with any other in the country,—has been cheerfully adopted. Some of the insane are employed on the farm; such as are inoffensive and manifest no disposition to escape, are allowed in good weather, to exercise during the day in a small yard, designed for their exclusive use, under the late arrangement of the grounds, suggested by Mr. MAGUIRE, the overseer. Another class, the furious, violent and ungovernable, or such as take advantage of every chance to escape, are kept constantly in their small apartments, under the charge of temporary nurses, selected from among the inmates of the house. There are two sets of cells—those most recently erected being eight feet by ten; those first constructed, ten by twelve. From their limited number, (fourteen cells being appropriated to the female lunatics, and twelve to the male,) and from the circumstance, that persons committed as vagrants are sent from the city and county to the alms house, as a work house, it is impossible to afford each lunatic a separate room; two, three or more are confined together. The cells in the basement of the building now being erected as an hospital for the colored women, will somewhat enlarge their accommodations; still they cannot be appropriately lodged; and their number is added to by frequent admissions.

Among them almost "every form of insanity has a representative of its terrors;" yet how much less enviable must be the situation of the lunatics shut up in the alms houses and jails of the several counties of the state, or of such as remain chained in the hovels of poor relatives, who cannot be persuaded to entrust them to the charge of strangers!

If a history of the mental sufferings, the medical treatment, and the present condition of the latter could be obtained, and tables similar to the preceding, of the insane in this institution had been annually prepared, what a melancholy record would be presented of cases "not improved,"—most unpleasantly contrasted with the statistical reports of the lunatic asylums of this country, as well as of Europe! These incontestibly prove, that, if insanity do not yield with more promptness than ordinary diseases, at least as large a proportion of recoveries will occur in recent cases, under an appropriate medical, moral and intellectual treatment, as from any other acute diseases of equal severity;—something more than ninety per cent. of recent cases, and from fourteen to twenty-five per cent. of old cases having been cured. This encouraging truth, together with the fact, that the chances of relief diminish nearly in a geometrical ratio with the period of duration of the attack, shows the importance of an early application for medical aid, and cannot be too generally known.\*

However, although time so rapidly diminishes the chances of recovery, and the difficulties of restoring reason, when once dethroned, are very great, requiring all the curative means suggested by science to benevolence—yet the recorded instances of restoration in cases long pronounced incurable, are sufficient to prevent us from despairing in any instance, unless organic change of the brain have occurred. "A case is stated by Pinel, of a lady who had been maniacal for twenty-five years, suddenly recovering her reason."

<sup>\* &</sup>quot;The ratio of curability of cases, which have existed less than three months, is nine in ten; and eight and a half in ten when it has existed under twelve months; on the other hand, of three hundred and eighteen cases, which had fallen under the care of Sir William Ellis, at the York West Riding Asylum, and which had existed from one to thirty years, only twenty-six were cured. M. Esquirol, one of the greatest living authorities on the subject of insanity, has asserted, that after the disease has passed the third year of duration, the probability of cure is scarcely more than one in thirty. Such, too, have been the general influences deduced from the results in several of the admirable insane establishments of our own country."—See second Appeal to the people of Pennsylvania, page 21.

Satisfied of the easy curability of insanity if attended to early, of the important aid to be derived from medicinal means, assisted by a moral treatment, and an intellectual discipline judiciously directed by capable and devoted attendants-it becomes a point of anxious enquiry in every public receptacle of the insane-"what proportion of insane patients are restored to the full possession of their reason?" and "what proportion are amended or relieved in cases where an entire restoration to reason has not been accomplished?" If the results of experience in the treatment of insanity during past years in this institution had been distinctly reported, we are sure, that the data supplied would only corroborate the statements in other sections of our country, where it has been proved, that few or no instances of recovery occur to cheer us among the many subjected to confinement and idleness, and to all the unfavorable, irritating and provoking influences of the "coercive system"—which is so happily calculated to develope "the mind's various and extensive capabilities of pain." The insane mind, not recognising the justice or necessity of it, feels with morbid distinctness any form of personal restraint; and in the absence of occupation or amusement to relieve the irksomeness of confinement, it grows unhappy, discontented and restless; unless soothed, its unfavorable influence is manifested by functional disorder; sleep and appetite are banished, the illusions are aggravated, the idea of outrage, indignity and privation engrosses the mind, till lashed into fury, its ravings only cease with physical exhaustion.

"To him whose mind is alienated, a prison is a tomb, and within its walls he must suffer as one who awakes to life in the solitude of the grave. Existence and the capacity of pain are alone left him. From every source of pleasure and contentment he is violently sequestered. Every former habit is abruptly broken off. He is alike removed from all the occupations of health, and from those delicate, acceptable attentions so soothing in sickness. The monotony of his confined apartment, the uninvited companionship of those who neither pity nor soothe him, the unavoidable recurrence of causes of annoyance and provocation, are but too well calculated to derange the vital functions of

the body, and thus aggravate the derangement of his mind. On every side is raised up an insurmountable barrier against his recovery. Cut off from the charities of life, endued with quick sensibilities to pain, and perpetually stung by annoyances, which, though individually small, rise by constant accumulation to agonies almost beyond the power of mortal sufferance; if his exiled mind, in its devious wanderings, ever approach the light by which it was once cheered and directed, it sees every thing unwelcoming, every thing repulsive and hostile, and is driven away into returnless banishment.

From the absence of suitable institutions among us, the insane have been visited with a heavier doom than that inflicted upon the voluntary contemners of the law. They have been condemned as no criminal ever was condemned, and have suffered as no criminal ever has suffered. The code by which they have been judged, denounces against them the penalties due only to crime, while it is unmitigated by any of those merciful provisions, which, in our penal code, attemper justice with humanity. Even when a criminal stands convicted of perpetrating the most atrocious crime, the benignity of the law accompanies him to the solitude where he is to expiate his offence. He is not only comfortably clad and warmed, and fed at the expense of the state which inflicts his punishment, but he is supplied with the means of moral renovation, and when those proofs of penitence and reformation are given, which it is in his own power to furnish, the laws relent and authorize the remission of his sentence. But though the insane have been made fellow prisoners with the criminal, they have suffered, if not from the privation of every comfort for the body, at least from the absence of every solace for the mind. Yet why should a man be treated even as a criminal, who, by universal consent, is incapable of crime? We understand what is signified by retributions for guilt, but to speak of retributions for insanity, does violence to every feeling of humanity and dictate of conscience. Yet this wretched class of our fellow beings, whose only offence is what others justly regard as amongst the direst of calamities—as incapable of moral guilt as unhappily they are of moral consolation, have been regarded by our laws

as though they were rather the objects of vengeance than of commiseration. And were a system now to be devised, whose express object it should be to drive every victim of insanity beyond the limits of hope, it would scarcely be within the power of a perverse ingenuity to suggest one more infallible than that, which, for so many years has been in practical operation amongst us. That system could advance one paramount claim to preference. Its experiments have been numerous, and have scarcely ever failed in rendering the most favorable cases of insanity in-This practice reacts upon the community by which it is sanctioned. To say nothing of the amount of human suffering, it has caused, it cannot be doubted that, with appropriate treatment, one half at least of all the lunatics whose support must now continue to be a burden upon the state while they live, might have been restored, and this half might have added as much to the resources of the state, as the other would have subtracted from them."\*

The result would be far different if the insane paupers could be properly classed, and treated on the "non-resisting principle," at the same time subjected to a well devised medicinal course. calculated to preserve or restore bodily health, with the assistance of cleanliness, exercise, air, and suitable diet; while mercy and kindness characterize the deportment of their nurses, who should invariably be persons of respectability, with experience, benevolence, dignity, patience, anxious watchfulness, and possessed of a just conception of their peculiar duties. "As far as in any manner possible, all causes of mental disquietude should be excluded by substituting persuasion for force, by practising forbearance, mildness and all the nameless offices of humanity, and by imbuing in every practicable way, the minds of the patients with a new set of pleasing, cheerful, grateful and benevolent emotions. In fine, the whole scheme of moral treatment is embraced in a single idea -humanity, -the law of love-that sympathy which appropriates another's consciousness of pain, and

<sup>\*</sup> See Report of Commissioners appointed to superintend the erection of a Lunatic Asylum, at Worcester, January 4, 1832.

makes it a personal relief from suffering, whenever another's sufferings are relieved."\*

This cannot now be termed a novel mode of treating insanity. It was introduced into France upwards of fifty years ago, with triumphant success, superceding the coercive system, the standard remedies of which, industriously applied, "have precipitated thousands of intellects from a condition of temporary danger, to one of irretrievable ruin. When the functions of the brain and general nervous system are disordered, resulting in irregularity of action and chronic delirium—can fetters, cheerless confinement, absence of occupation, and unceasing tumult, recall harmonious action, and assist the recuperative energies of the mind to restore "an immortal nature to the capacity of virtue, and the enjoyment of happiness?" Every enlightened mind-every humane heart will respond in the negative. Then why is our state so backward in providing a home for her destitute insane, where medical skill may unite with intelligent benevolence in the good work of allaying the morbid excitement of the brain, and regulating the disordered actions of a chaotic intellect, recalling reason, and re-awakening all its natural sympathies? To this class of her citizens she is in long arrears. "One of the strongest, if not one of the first principles of social obligation, arises from the necessity of relief, and the ability to relieve. And when does a man so urgently require the light of others to direct his steps as when he wanders in darkness? When does he stand in such extremity of need of the knowledge and guidance of his fellow men, as when his own mind is a wild chaos, agitated by passions which he cannot quell, and haunted by forms of terror, which the living energy of his nature is perpetually calling into being, but cannot disperse? When does he so strenuously demand their succor, as when his own soul is like a living wound, and he has lost all power of distinguishing between the sources of healing and of torture? If the insane have done nothing to forfeit the claim which men who suffer have by the law of nature, upon men

<sup>\*</sup> See first Annual Report of Trustees of the State Lunatic Asylum, at Worcester, Mass., December, 1833.

who are able to prevent that suffering, they should be treated not with a sole regard to the security of others, but with special reference also to their own misfortunes, and in a manner adapted to shorten their duration, or where that is impossible, at least to mitigate their severity. Even if the public good imperiously demanded the coercion of the insane, it would not be just to cast them into hopeless imprisonment, thereby making the cause of their confinement remediless, and the confinement itself terminable only by the death of the sufferer. In its practical operation, such a system is a direct consignment of human beings to the long protracted and mysterious horrors of madness."—Idem.

On the other hand what has been the practical operation of the treatment opposed to this system of coercion, and which, in obedience with the laws of humanity, substitutes mildness and patient persuasion for harshness and force—liberty, exercise, and occupation for confinement, inactivity and idleness? We believe we cannot better serve the class of lunatics, whose claims we wish to urge, in depicting the results which have been realized from this change, than by again quoting the language of one, whose cloquent pen has so vividly depicted the inevitable horrors of insanity, when neglected or deserted, and uttered such rich appeals in behalf of those whose feelings and emotions, at least, may be soothed and subdued, even when the integrity of their intellects cannot be restored.

"However deeply all our better feelings may be moved by the reflection that so many of our fellow beings, under the auspicious influences of this institution, have already been restored to reason and returned to bless the families and friends, who, under the former coercive system of treatment, would have mourned their loss 'without hope;' yet the ameliorated condition of such as have not been recovered, we regard as a subject of equal congratulation among men, and gratitude to heaven. No one, who has not actually seen, from time to time, the inmates of the hospital, can comprehend the extent of the change which has taken place in every external indication that marks the physical and moral condition of a human being. Many who, in their paroxysms, used formerly to wound and lacerate their own persons to a degree

that threatened life itself, now habitually exercise an ordinary degree of prudence in avoiding the common causes of annovance and accident. Not less than one hundred of those brought to the hospital, seemed to regard human beings as their enemies, and their first impulse was to assail them with open or disguised force. Now there are not more than twelve who offer violence. Of forty persons who formerly divested themselves of clothing, even in the most inclement seasons of the year, only eight do it now. Through all the galleries, there is far less susceptibility to excitement, more quietude, more civility and kindness exercised towards each other. The wailings of the desponding, and the ravings of the frantic, are dispelled. The internal change is legible upon the countenance. With the insane, it is emphatically true, that the dark shadows of the mind are visibly projected upon the face. Hence, from the alteration which has in many instances occurred in the outward aspect, amounting almost to a change in identity, there may be inferred a corresponding alteration of the condition within. The deep lines of anguish have been obliterated or softened, whose sharp engravings were begun many years ago in despair. The wide circle and heart-sickening variety of horrors, exhibited by the inmates when first brought together, have been greatly reduced in extent, and mitigated in quality."\*

Among the means conducive to so favorable a result, no one is more important than the principle of never allowing a patient to continue idle, if at all in a condition of general health admitting his engaging in light or laborious occupations. The mental revulsion induced by labor, prevents the morbid illusions and the real or fancied sufferings from wholly engrossing the attention. Gardening, farming, or mechanical operations—particularly if the patient has been accustomed to them, encourages cheerfulness and contentment, promoting at the same time refreshing sleep and appetite—the health becomes improved, and the mind invigorated. The anticipation of the benefits of labor, or the contemplation of its results, is also effectual in awakening a feeling of

<sup>\*</sup> First Annual Report of the State Lunatic Asylum, Worcester, Mass., December, 1833.

satisfaction, and self-respect, which greatly aids the patient in controlling any disposition to violence and indecency, and in banishing unpleasant impressions, and feelings of irritation and degradation. Of course, during the vascular and nervous excitement frequently existing in the early stages, rest, seclusion, and quiet, will best allay diseased irritability of body and mind; but as this disappears, exercise and employment adapted to the condition of the patient, promotes convalescence and strengthens the mental and bodily powers, greatly aiding the medicinal treatment in removing the functional derangement in that portion of the physical system—the brain and nerves, which causes insanity.

We might also quote evidence to show the beneficial influence of introducing sabbath services within the confines of an asylum, judiciously arranged and conducted; and that a large proportion of the patients, pleased if allowed to attend, behave with great propriety. But we have already far exceeded our prescribed limits, and must resign the subject to the charge of a more able and experienced advocate.

It cannot be necessary to dwell longer upon the uncharitableness of sending our insane paupers into alms houses, where it is
impracticable to command the varied and nicely adjusted means
best calculated to recall, and re-establish physical and mental
health. What inconceivable good might have resulted from the
expenditure of a comparatively inconsiderable sum years ago, in
the establishment of a state lunatic asylum!—a large proportion
of those, who must now be a burden upon the community as long
as they live, might have been restored to their families, to happiness and to usefulness.

When insanity was scarcely looked upon as a legitimate subject for curative treatment, alms houses were selected as suitable places for the safe confinement of the unfortunate subjects of it. But are they to be so regarded now? We trust not. Convinced that the want of a well endowed Pauper State Lunatic Asylum is a serious evil, the magnitude of which should be pressed upon the notice of our people and our government—we venture thus to entreat you earnestly to plead for its removal; feeling assured, that the intelligent body of a people, whose enterprize and de-

termination to do all in their power to promote the true and permanent interests of their state, and fellow-citizens at large, have induced the expenditure of millions in rail roads, canals, and various other internal improvements, will promptly respond to the cry for relief, and advocate the desired provision for their destitute insane, if made to comprehend its necessity. Such an institution, assuming a high rank among our state enterprizes, would prove a blessing to a helpless, and heretofore neglected class of our people, and continue an admired monument of her benevolence.

### HOSPITAL REPORTS.

### REPORT OF THE HOSPITAL DEPARTMENT

OF THE

### BALTIMORE INFIRMARY.

Abstract from the books of Baltimore Infirmary, showing the number of cases treated, and the results of the treatment in the Institution, for the twelve months ending December 1, 1840, with the Surgical operations for the same period.

E. M. HALL, Senior Student.

DISEASES.	
Abcess of Mammæ 1 1 3 3 3 3 4 1 1 2 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4	1
Abcess of Mammæ 1 1 3 3 3 3 4 1 1 2 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4	1
"Knee.       -       -       -       -       3         "Thigh.       -       -       -       -       1       1       1       2         "Spleen.       -       -       -       -       -       1       1       1       1         Amaurosis.       -       -       -       -       -       -       1       1       1       1	1
"Knee.       -       -       -       -       3         "Thigh.       -       -       -       -       1       1       1       2         "Spleen.       -       -       -       -       -       1       1       1         Amaurosis.       -       -       -       -       -       -       1       1       1	1
"Thigh	3
Spleen 1 1 1	2
Amaurosis 1 1 1	
	1
Amenorrhæa 1	1
Apoplexy, 1 1 2	2
Arachnitis 1 1 1	1
Artificial Joints 2	2
Asthma 1 2	2
Bilious Fever 38 8 46	6
Bronchites 1 1 1	
Burn 2 2	2
Cut Throat 1   1	
Cataract 5 2 1 8	
Catarrhal Fever 2	2
Calculus in Bladder 3	3
Catarrhal Fever.       -       -       -       2         Calculus in Bladder.       -       -       -       3         "Ureter.       -       -       -       2         "Urethra.       -       -       -       1	2
" Urethra 1 1	1
Cholera Morbus 1	1
Chorea 1 1 1	1
Club Foot 1 1 1	1
	3
Conjunctivitis.       -       -       -       -       2       1         Concussion of Brain.       -       -       -       1       2         Congestion of Brain.       -       -       -       -       1       1	2
Congestion of Brain 1 1 1	1
Cynanche Tonsillaris 3	3
Cystitis 2 2	2
Deafness 1 1	
	2
Disease of Spine 2 2 1 1 1 1	1
" Hip joint 1 1 1	1
Dislocation of Shoulder 1 1	1
" Clavicle 1	
Dropsy 5 6 1 3 15	
	18

DISEASES.	Cured	Relieved	Removed	Died	In the house	Total
Brought forward	76	21	1	14	6	118
Dysentery,	1	1	_		1	3
Dyspepsia	1					1
Disease of Eye					2	2
Disease of Bones of Cranium.					1	1
Epilepsy		1			2	3
Ectropium	1	_				1
Enlarged Liver		1				1
"Spleen	1					1
Fistula in Ano.	1					1 1
To de COle : l	1					1
Fracture of Clavicie	3				1	4
Fore Arm.	1				1	2
" Leg	2				1	2 2
" Olecranon	4	2				2
"Tibia	2	-				2
" Orbital process of Frontal Bone	_				1	1
Fungus hæmatodes of Rectum			1	1	-	2
" of Eyelid		1	_			1
Gout		_			1	1
Hypochondriasis		2				2
Hemorrhoides	1					1
Hernia Inguinal	2					2
Hernia Inguinal		1				1
Gunshot Wound					1	1
Hydrocele. '- '	3	1				4
Hysteria	2	1				3
Injury of Eyes		3				3
Foot	4	1				5
"Knee joint	1					1
" Scalp	2					2 3
"Spine	3					12
Intermittent Fever	7	2		2	3	3
Irritable Uterus	1	Z			1	1
Inflammation of Hip joint Jaundice	1				1	1
T . 1	1	1				i
Lumbago		1				1
Mania. a potu	10	1	1	4	3	18
Mania	10	1	1	*	2	4
Melancholia	1	î			~	1
Minor diseases of sundry kinds	1					1
Molites Ossium	1					1
Monomania		1				1
Necrosis	1		1			2
Nephretis	1					1
Old Age			1		1	2
Ophthalmia	2				1	3
Orchitis	3	1				4
Osteo sarcoma of lower Jaws	1					1
Paralysis Partial		1				1
"General	1	2	İ			2
G: 1 C	100	412	5	21	28	240
Carried forward	139	47	0	41	40	240

DI	SEA	A S I	E S					Cured	Relieved	Removed	Died	In the house	Total
	Brou	ught	for	ward	_	-	_	139	47	5	21	28	240
Phthisis			-	-	_		•		3	1	10	2	16
Pneumonia	-	~	- '	2	_		-	2	1	1	1	2	7
Polypus of Nose.	-	-	-	, -	-		-	1					1
Uterus.		-	-	-	-		-	1					1
Prolapsus of Uterus	s	•	-		-		-	1					1
Ani.	-	-	-	-	-		-	1					1
Pregnancy	-	-	-	-	-		-	1					1
Psora	-		-	-	-		-	4			1		5
Rheumatism	-	-	-	·-	-		-	6	3	1	1	2	13
Schirrous of Abdor	men.	-	-	-	-		-			1			1
" Eye.	-	-	-	-	-		-	1	1				2
" Mamma		-	-	-	-		-	4	1				5
" Perineu	m.	-	-	•-	-		-	1					1
Scrofula	-	-	-	-	-		-	3					3
	-	-	-	-	-		-	1					1
Sprained Knee.	-	-	-	` <b>-</b>	-		-		1				1
Stricture of Urethra	ւ. ։	-		-	•		-	1					1
Syphilis	- '	• ,	-	· •	-		-	18				2	20
"" Secondary	r	-	-	-	-		-	9	3			3	15
Tetanus	-	~	-	~	-		-				3		3
Tetter	**	•					-	1	1				2
Tinia Capitis	-	•	-	-	-		-	2					2
Ulcers.	-	-	-	•	-		-	11	1				12
DOLOTATO GOV	-	-	-	•	-		-	3	3				6
White Swelling.	-	-	**	-	-		-	1					1
Wounded Femoral	Arter	у.	-	•	-		-				1		1
	Tota	aļ -			•	-	•	212	65	9	38	39	363

SURGICAL OPERATIONS.	Cured.	Unsuccessful.	Died.	Total.
Amputation of Fore arm	2			2
" " Thigh	1			1
" " Leg	4			4
" "Thumb	1		• • • • • • •	1
Operation for Club Foot			• • • • • • •	1
" " Artificial Joint		1	• • • • • • •	1
" Polypus of Nose	1			1
" " " Uterus	1			1
" "Hydrocele	2		• • • • • •	2
" " Fistula in Ano	1			1
" Cataract	4	1		5
" Fungus Hæmatodes of Re	ect		1	1
"Eye	elid 1			1
Extirpation of Eye	2			2
Ectropium of Eye	1			1
Removal of Schirrous Mammæ	4			4
" Tumor of Perine				1
" Portion of lower Jaw, for Osteo Sarcoma	: (1)			1
Osteo Sarcoma	5			
			_	
Total	28	2	1	31

### ARMY REPORTS.

### SURGEON GENERAL'S OFFICE.

Gentlemen:-

The enclosed special report of a case of axillary aneurism, and the operation of tying the subclavian artery, has recently been received at this office. If you think proper to give it a place in the "Maryland Medical and Surgical Journal," it is at your service.

I have the honor to be, gentlemen,

Your obedient servant,

H. L. HEISKELL,

Acting Surgeon General.

G. C. M. ROBERTS, M.D.,

NATHANIEL POTTER, M.D., and others,

Editorial Committee Medical and Surgical Journal, Baltimore.

### REPORT OF A CASE OF AXILLARY ANEURISM,

IN THE GENERAL HOSPITAL, U. S. A., AT PICOLATA, E. F.

BY SURGEON CHARLES M'DOUGALL, U. S. ARMY.

John Kane, ætat. 24, a private of company K., third artillery, while escorting an officer some weeks since, to St. Augustine, was shot by the Indians, and wounded in two places; one ball striking midway between the eighth dorsal vertebra and the angle of its rib, appeared in front, under the integuments, without having penetrated the abdominal cavity; the other, entering about two inches above the lower angle of the scapula, came out anteriorly in a line with, and severing the axillary artery, equidistant from the middle of the clavicle and the axilla. He ran his horse for a half mile, after being shot, when he fell, exhausted

from hæmorrhage, and was brought to the general hospital in a state of insensibility. The circulation being extremely weak, skin cold and pallid, a little wine was administered, which, with warm applications to the extremities, soon brought on sufficient reaction to enable the system to recover its lost energies. On making a careful examination of his wounds, a ball was extracted from under the skin of the left side; the integuments around the anterior upper wound, were found enormously distended, having a dark, livid appearance. Life, in this case, had been preserved by the ordinary laws of the animal economy, syncope and pressure, from the effused blood. Simple dressings to the wounds, perfect rest, evaporating lotions, moderate pressure, and the usual antiphlogistic means, constituted the treatment.

At the expiration of a fortnight, the effused blood and swelling had disappeared. The external wounds were healthy, and, judging from the small discharge, the internal track of the wounds had united by the first intention. The patient was considered out of all danger, and continued to improve until the end of the fourth week, when a small pulsatory tumor suddenly appeared over the axillary artery, and directly under the external wound. A false aneurism was rapidly forming. The tumor continued to enlarge and pulsate with great violence, although pressure had been made above and upon it, and, after the tenth day, extended above, to the clavicle, pushing that bone out of its natural position, downwards, into the axilla, and anteriorly, putting the pectoral muscles and integuments so greatly on the stretch, as to threaten momentarily to give way; pulse at the wrist almost imperceptible; has frequent and violent attacks of neuralgic pains, along the arm, forearm, and fingers; arm insensible to touch, and motionless. Sound, communicated to the ear by the stethescope, like the rushing of fluid at each descent of the piston of a forcing pump. There could be no doubt or hesitancy as to its important character. The locality of the woundhæmorrhage-distension-absorption of the effused fluid-sudden appearance of a small pulsating tumor—its increase—pulsating equally over the whole circumference—sound—with the entire absence of all the symptoms of suppuration, made it doubly

certain that the artery had given way at the wounded point. Apprehending an immediate rupture of the tumor, after consultation with that able officer of the Medical Staff, Assistant Surgeon Hoxton, (who at the time, was among the number of my patients,) and agreeing that the taking up of the subclavian artery above the clavicle was the only alternative, determined upon the operation on the following day.

Saturday, Dec. 12th.—All the necessary arrangements being made, sixty drops of tinct. opii were given, and as soon as its effects were most apparent, he was laid upon a narrow operating table. After depressing the shoulders as much as possible, and drawing the skin one-third of an inch over the clavicle, a transverse incision was made directly upon that bone to near its acromial end; this was done, in order to make the first cut with precision. The integuments resuming their natural position, the platysma myoides and superficial fascia were divided by repeated and cautious strokes of the knife to the extent of the first incision. The bleeding from two superficial veins, made it necessary to tie them. The external jugular was carefully avoided. About half an inch of the sterno-cleido-mastoideus was cut, the better to expose the nerves and vessels beneath. After separating the lymphatic glands and fatty tissue from their connexions, the cervical nerves were brought plainly into view, and on the inner side and beneath, to a great depth, was recognized the subclavian artery, which, for want of a properly curved aneurismal needle, was with some difficulty secured by a ligature.

All pulsation at the wrist and of the tumor now ceased. The pain, which continued throughout most of the operation, subsided. The edges of the incision being brought together by three sutures and two adhesive strips, and a light bandage drawn over the whole, the patient was conveyed to bed. R. pulv. doveri. grains x. Attendants to watch by the bed side.

13th—Passed a quiet night; no return of the neuralgic pains; no pulse at the wrist; arm still insensible; temperature below natural; some excitement; tongue much furred; bowels have not been opened; V. S. 1 lb.; R. hyd.; submur. grs. xv.; ol. Ricini 3 iss; six hours after. Evening—medicine has operated; skin

moist; tongue cleaner; no change in the condition of the arm; tumor diminished some; R. pulv. doveri, grs. x, 9, P. M.

14th—Slept well; expresses himself as feeling comfortable; tongue yet furred; R. acet. morph., tart., ant. ãã grs. 4, 9, A. M. Electric shocks to the arm. Evening—no apparent change; electric shocks cause an agreeable tingling sensation; looks well; repeat morning's prescription at 9, P. M.

15th—Continues to improve in general appearance; tumor evidently much smaller; feels soft and flabby; R. massa. ex. hyd., bi carb. sodæ āā grs. x, at 9, P. M.

16th—Bowels moved; wound examined and dressed. charge free and healthy; but a small part of the wound united; a slight blush around the clavicular end of the wound; adhesive strips with light cerated dressings over. Evening—no variation.

17th-Wound dressed; healthy granulations appear; free from excitement; arm has its natural warmth, and fast recovering its sensibility. Tumor daily and rapidly diminishing.

18th—Patient comfortable and cheerful; electric shocks continued; wounds dressed morning and night. 12, P. M.—suddenly called up to visit KANE; found him deluged in blood; breathing laborious; the hæmorrhage had taken place while he was asleep, and was arrested by the syncope; bandage being glued by the drying of the blood, was not disturbed; compress placed over it, with directions to attendants where to apply pressure. artery had undoubtedly ulcerated at the point where the ligature had been applied.

19th-No bleeding since 12 o'clock last night. Noon-another alarming hæmorrhage, which was arrested by pressure; attendants to keep up constant pressure with the thumb by reliefs; pulse barely perceptible, no bleeding since noon; surface cold. He continued to linger until 12, P. M., when he breathed his last.

Examination ten hours, post mortem. An incision eight or nine inches in length was made, extending from the centre of the clavicle, over the top of the tumor, to some distance down the inner part of the arm; the integuments were freely dissected and turned back, the pect. major cut and drawn out of the way. This muscle was attenuated, perhaps by the distension and absorption;

the blood had been forced through its fibres like through a seive, and in some places appeared incorporated with its substance. The same was the case with the pect. minor. On raising both these muscles, an immense mass of coagulated blood, which appeared partially organized, was disclosed beneath, and contained in an imperfectly formed sac. The sac being washed out and cleaned, brought the parts more fairly into view. The artery was found completely divided, and the ends retracted to the distance of half an inch. Not the slightest adhesion had taken place, the mouths being as patulous as if just cut; veins and nerves perfect, and in position. To expose the parts above the clavicle, an incision was made along the course of the mastoid muscle, commencing about half way between the mastoid process and the sternal extremity of the clavicle, and met by a transverse cut along the whole length of that bone. The fascia, Platys. Myoides, Stern. Mastoideus, were divided, and the subjacent parts freely exposed. The artery had ulcerated where the ligature had been applied, presenting a scollopped, uneven edge at both orifices. No trace of adhesive inflammation in it could be detected. The inner coat of the artery had a pale, bleached appearance. A small coagulum of blood rolled out of the orifice nearest the heart, when the finger was pressed upon it. Granulations were found at the bottom of the wound, and had completely filled it, excepting where the ligature was. The surrounding tissues were consolidated by adhesive inflammation, and rendered the dissection tedious and difficult.

The remarkable fact in this case of the perfect want of adhesive inflammation at both points where the artery had been divided, can only be accounted for, on the supposition of some mysterious constitutional influence. Six weeks had elapsed from the reception of the wound. Kane was a large, muscular, healthy man, and in good condition for a surgical operation. The artery was fairly tied with a moderate sized ligature, and with but little disturbance of its natural connexions. Every symptom, subsequent to the operation, appeared favorable to its ultimate success. It is true, that the system had betrayed a certain degree of nervous irritation from the first, distinct from the violent

neuralgic pains, and in a greater degree after the operation, but it did not impede the necessary adhesive inflammation in the surrounding parts. The fact of the artery being tied near where the superscapular is given off, is not sufficient to account for the total absence of an effort of nature to unite its sides; inasmuch as it has been satisfactorily proven, that an artery, although tied immediately at the point where a branch is given off, will unite at the compressed part, so as to be secure against all danger. We are therefore constrained to admit that some secret action beyond the reach of medicine or art, exercised a positive influence over the animal economy, inimical to the progress of a healthy cure in all the structures alike.

January, 1841.

Vol. II.—No. 1.

8

### EFFECTS OF TEMPERANCE SOCIETIES

IN DIMINISHING SICKNESS AND MORTALITY AMONG THE TROOPS IN INDIA.

BY WILLIAM BELL, SURGEON OF THE CAMERONIANS, CALCUTTA.

THE Temperance Society of the Cameronians was established about two years ago, and though the numbers have fluctuated considerably, yet, upon the whole, it has been well supported, and there can be no doubt that its influence has been most favorable both on the health and on the morals of the regiment. In December, 1837, the average monthly strength had been 121; and in December, 1838, it remained 159, having fluctuated in the meantime from 208 to 108. These alterations are to be accounted for, in some degree, by the arrival of detachments of invalids and recruits, which generally interrupt for a time the steadiness of the corps. The effect in health during 1837, was that of the society the per centage of sick amounted to 31-5, and of the rest of the regiment to  $101\frac{3}{4}$ . During 1838, the average daily sick of the society has been 6½ per cent., and of the remainder of the regiment 9 per cent.

These results, however gratifying, do not convey an adequate idea of the benefits of the society; for a number of men whose constitutions had been ruined by dissipation, became members, and several such remained in hospital nearly the whole year, until they were invalided. The admissions of the last year have been of the society, 1 in 25, and of the remainder of the regiment, 1 in 11.

This is the first instance, I believe, of any regiment stationed in Fort William, having established a regular Temperance Society, and it therefore becomes a duty to point out such favorable circumstances in the state of the corps, as may fairly be attributed, more or less, to its influence, in order that others may be induced to seek for the same results by the adoption of similar institutions.

1st. The deaths in the regimental hospital have been in 1837, 26, and in 1838, 22, whereas the average mortality in Fort William, for a period of fourteen years previously, had been seventy-

two nearly.

2d. The spirits drunk in the canteen have been for 1837, 9673 gallons less, and for 1838, 8242 gallons less than the regiment was entitled to draw.

3d. During the above two years, the beer sold in the canteen amounts to 156 hogsheads,  $46\frac{1}{2}$  gallons, and the wine to 326 dozen.

This consumption of beer and wine is not quoted as very creditable or praiseworthy, but as a proof that the use of spirits, in a great degree, was abandoned, even by those who did not choose to be particularly abstemious with regard to their beverage.

4th. The remittances by the men to their friends at home, and to the Edingburgh Savings' Bank, were for 1837, £587 18s. 9d., and for 1838, £763 4s. 6d.

This is not quoted as a remarkably large sum, being smaller than those of previous years, but as a proof that even on half batta stations, and where the temptations to spend money are numerous, the soldier who can avoid dissipation has both the means and the inclination to provide, to a certain degree, for the future comfort of himself or his friends.

5th. Since the arrival of the regiment in India, it appears that the consumption of spirits has diminished from the enormous quantity of 10,900, 12,000, and 14,000 gallons to 2516.

What is the cause of this remarkable change?

It may depend on more causes than one; but there can be no doubt that the chief is the establishment of a Temperance Society, and its principles.

6th. There are other circumstances which deserve to be mentioned, such as the decrease of liver complaints from 111, 140, and 135, as in the years 1832, '33, '34, to 82, and to 50, as during the last year; but this may be partially owing to other causes, besides the disuse of ardent spirits, as to change of climate, from the upper to the lower provinces, &c.; yet a comparison of the tables will show the great superiority in regard to health in the

Cameronian over any other corps that has ever been stationed in Fort William.

7th. As Temperance Societies have been formed in most of the Queen's corps serving in Bengal, the following abstract is here added, showing the result of the whole from the 1st January to 30th June, 1838, as drawn up by the Inspector General.

Abstract of the comparative state of health of the Temperance Societies of her Majesty's Troops serving in Bengal, from January 1st to June 30th, 1838.

Months.	Relative proposed to St.						number of y in Hos- the Socie-	ge of the ety.	number of ly in Hos- ot of So-	society.
Mor	Strength of a perance Strength of mainder of mainder of society.  Temperature of the society of			nainder of egiment.	Average n men dail pital of 1 ty.	Per centage Society	Average nu men daily pital not ciety.	Per centage the Socie		
Jan Feb March April	$1840 \\ 1542$	2639 2879	1 in 1 in		1 in	9.245-266 7.149-390	49.24-31 41.20-28 45.12-31 74.12-30	2, 54 2, 27 2, 94 5, 47	206.27 31 218.11-28 248.18-34 316.22-30	8, 15 8, 27 8, 66 10, 28
May June	1282 1364	3161 3065	1 in 1 in	18.44-69 19.53-69	1 in 1 in		67.6-31 62.3-30	5, 24 4, 55	336.30-31 317.6-30	$ \begin{array}{c} 10, 66 \\ 10, 35 \\ \hline 10, 20 \end{array} $

[The preceding paper comprises only a small part of the evidence communicated to the public on this vital subject, and all having the same bearing. If total abstinence from intoxicating drinks generally, should be substituted in India for the abstinence from spirituous liquors only, we have no doubt but the results would be greatly more striking still.]

India Journal of Medical Science. Nov., 1839.

[Note.—The above article must be highly gratifying to the friends of the Temperance cause, as showing most conclusively, the beneficial results of Temperance associations, upon the soldier. Pre-eminently exposed as this branch of the national defence in our own country is, to the causes of disease, and early death, may we not hope, that the friends of the soldier in our Army and Navy, may take timely advantage of these excellent associations, in fortifying him, as far as possible, against this fruitful source of disease? We should be gratified to receive from the medical gentlemen in our Army and Navy, similar reports to the above, for publication in the Journal.]

### NAVAL.

### ON THE CAUSE OF SCURVY,

AND THE MEANS OF CURING IT.

BY GEORGE BUDD, F. R. S., FELLOW OF CAIUS COLLEGE, CAMBRIDGE, AND PHYSICIAN TO THE SEAMEN'S HOSPITAL, "DREADNOUGHT."

Two centuries ago, scurvy was a common disease throughout all the northen countries of Europe. The writers, from whom we have derived accounts of it, agree in stating, that it generally showed itself towards the end of winter, or in the early part of spring, and that it uniformly disappeared during summer and autumn; but that it was at the close of long and severe winters, or when the country had been laid waste by war, and during long sieges, that its ravages were principally felt.

As agriculture and gardening improved, scurvy became gradually less frequent, and we have witnessed its almost complete extinction on land, as the influence of these arts has extended to the most remote parts of Europe and to the humblest classes. But even in recent times, there are instances in which, under the peculiar circumstances I have specified, it has produced disastrous effects on shore.

In the spring of 1795, it was general among the French soldiers in the army of the Alps; and in 1801, during the siege of Alexandria, it prevailed among the inhabitants and garrison to a most frightful extent. During the siege which was commenced by the English in May, and which lasted only to the end of August, 3500 scorbutic patients were received into the military hospitals which the French had established in that city. But it

is not only in armies, and during sieges, that we meet with even modern instances of scurvy arising on land. In the reports of the inspectors of prisons, for the years 1836, 7, and 8, there is frequent mention of its occurrence in our gaols and prisons.

These examples are sufficient to show that scurvy is not peculiar to seafaring men; but it is, unquestionably, during long voyages, that its fatal effects have been most felt, and its existence as a prevalent disease maintained.

The narratives of all our early navigators abound with descriptions of the frightful ravages of scurvy. Vasco de Gama, who first discovered a passage to the East Indies by the Cape of Good Hope, in 1497, lost 100 out of 160 of his men, by this distemper.

In the first voyage for the establishment of the East India Company, the equipment, consisting of four ships, with 480 men, sailed from England on the 2d of April, 1600; and by the time they arrived at Saldanha, on this side of the Cape of Good Hope, there had died of scurvy 105 men—nearly one-fourth of their complement.

The memorable expedition under Lord Anson, in 1740, and the four following years, offers another example of the mortality formerly occasioned by scurvy during long voyages. At the end of two years from their leaving England, the vessels engaged in the expedition had lost, from this disease, a larger proportion than four in five of the original number of their crews.

Scurvy continued to prevail in all the fleets of this country, until the year 1795, when an Admiralty order was first given for furnishing the navy with a regular supply of lemon juice, which had been long known to be a remedy for scurvy, and which some recent experiments had proved to be equally efficacious in preventing it. From this time we may date the extinction of scurvy in the British navy. It has, indeed, shown itself on several occasions since, especially in some of the expeditions for the discovery of a north-west passage; but it has prevailed only in a slight degree, and has almost always been suppressed by an additional allowance of lemon juice.

This happy result is far, however, from being realized in the

commercial marine of this country. The means, which experience has proved to be of such certain efficacy, and which are so easily adopted, are in many instances neglected. In the space of a year and a half, nearly fifty cases of scurvy have been admitted into the Seamen's Hospital, Dreadnought; and from information obtained from these patients, I am led to estimate the number of sailors who have entered the port of London, affected with scurvy, during this period, at not less than double that number. The wretched condition of some of these men has convinced me, that the descriptions of the sufferings occasioned by scurvy, in voyages of the early navigators, have not been exaggerated. Most of the cases of scurvy received into the Dreadnought, are from vessels that have come from the Mauritius, Sidney, Ceylon, China, or some port in India.

CAUSES OF Scurvy.—Salt Provisions.—In consequence of the frequent occurrence of scurvy at sea, and on shore in persons whose diet, like that of sailors, consisted chiefly of salt meat, it was at one time supposed to be occasioned by excessive use of salt. A more extended view of the circumstances under which scurvy arises, is sufficient to show that this opinion is erroneous. The history of the disease furnishes us with numerous instances in which it has occurred in persons living entirely on fresh provisions. No longer ago than the autumn of 1836,\* scurvy prevailed to a great extent among our troops stationed in the New Province of Queen Adelaide, at the Cape of Good Hope; when, according to the report of Dr. Murray, the principal medical officer at the Cape, the men had no harassing duties, and were abundantly supplied with good fresh meat, without having had an ounce of salt provisions. They had been, however, a long time without fruit or fresh vegetables.

The circumstance that scurvy may occur among persons living solely on fresh meat; and the fact, which the history of modern navigation has fully established, that it may be prevented for any

<sup>\*</sup>Autumn at the Cape corresponds to spring in the northern hemisphere. In the appearance of scurvy at that season, and in many other particulars mentioned by Dr. Murray, there is a perfect agreement with some of the accounts left us of the occurrence of scurvy in armics on the continent in the early part of last century.

length of time in persons who subsist on salt provisions, and can be readily cured even in those who continue the use of them, are sufficient to justify the conclusion that salt has no share whatever in producing it.

Sea Air.—The frequency of this disease during long voyages, led also to the supposition that the sea air, or some unknown marine agency, had an especial influence in causing it. At present, this opinion scarcely needs refutation. Modern experience has amply proved, not only the harmlessness, but the extraordinary salubrity of sea air; the fact that it exerts no particular influence in the production of the scurvy, was, however, first established by Captain Cook, who, in 1772, 3, 4, 5, in the Resolution, performed a voyage of three years and eighteen days, in all climates, from 52° N. to 71° S., with the loss of only one of his crew by disease.

Cold: Moisture.—The fact that scurvy, when it first attracted attention, prevailed exclusively in northern countries, early led to the opinion that cold and moisture had a considerable share in causing it, and this opinion has been maintained up to the present time by the highest authorities on this subject. An attentive consideration of the history of scurvy, is, I believe, sufficient to show that the influence of these causes, if indeed they have any influence, has been much overrated, and that the comparative immunity from this disease formerly enjoyed by fleets in warm latitudes, was mainly owing to supplies of oranges and other fruits, with which Cadiz, Madeira, or the islands of the West Indies, furnished them.

Scurvy may occur in all climates; either on land or at sea; in persons who subsist on salt meat or fresh; and in situations in which the utmost attention is paid to cleanliness and ventilation. There is one condition, however, which is necessary for its production, namely, prolonged abstinence from succulent vegetables or fruits, or their preserved juices, as an article of food. When this condition is fulfilled, we find scurvy arising in persons whose situations are the most various in every other respect; while not a single instance can be cited of its occurring in a person well supplied with these vegetables or fruits. This circum-

stance, together with the fact that scurvy is in all cases rapidly cured when a supply of such vegetables or fruits is furnished, lead us to consider the abstinence in question as its essential and sole cause. I have said that this abstinence must be prolonged: it would seem, indeed, that in a person previously well supplied with vegetable juices, privation of them from two to five months is necessary to produce the disease. On land, scurvy has shown itself generally at the end of winter, or in spring: at sea, it has appeared after voyages of very different durations; in some cases, at the end of a month or six weeks; in others, after the lapse of five or six months. The difference depended on the time of year when the vessel left port, or rather on the previous diet of the men. The fatal effects of scurvy have, in fact, been most felt during sieges commenced in spring, and in voyages entered on in spring from cold countries. The siege and the voyage have in these cases prolonged it to the inhabitants and the sailors-not the cold of winter, but abstinence from fresh vegetables, which, in former times, the cold of winter always occasioned.\*

Preventives.—The most powerful means for the prevention of scurvy is the use of oranges, lemons, limes, shaddocks—in fact, of any fruits of the orange tribe. I have already stated that lemon juice was first systematically introduced into nautical diet in 1795, by a general order of the Admiralty, and that it has completely realized the expectations of those who proposed it.†

The present allowance of lemon juice in the navy consists of a fluid ounce, which, after ships have been a fortnight at sea, is served daily with an ounce and a half of sugar, to each of the men.

It was originally sent to sea in the form of a rob, made by evaporating the juice by a slow heat to the consistence of a thick

<sup>\*</sup> I have already noticed the great prevalence of scurvy among the garrison at Alexandria, during the siege of that city, which was undertaken in May, and the dreadful mortality it occasioned in the first voyage for the establishment of the East India Company, which was commenced on the 2d of April.

<sup>†</sup> In 1780, 1457 cases of scurvy were admitted into Haslar Hospital. In 1810, one of the physicians of that Hospital stated that he had not seen a case of it for seven years; and in the four years preceding 1810, only two cases were received into the Naval Hospital at Plymouth.

syrup. This, however, was found to be inferior to the fresh fruit; and it was in consequence recommended by Sir Gilbert Blane, that the juice should be preserved by the addition of a certain portion of spirit, without the aid of heat. When prepared in this manner, its virtues seem unimpaired.

The juice with which the navy is supplied, is brought from Sicily, and kept good by the addition of one part of strong brandy to ten of the juice.

Most sour fruits are in all probability anti-scorbutic, and instances are well authenticated of the good effects of grapes and apples.

As the expense of lemon juice offers some impediment to its employment in the merchant ships of this country, to the extent necessary for the complete extinction of scurvy, it deserves to be ascertained whether the juice of apples, preserved like that of lemons, by the addition of a certain proportion of spirit, would not be an effective substitute.

All succulent vegetables that are wholesome, are, perhaps, as well as fruits, more or less anti-scorbutic; and this property seems to be possessed in a high degree by many of the vegetables in common use—as the cabbage, turnip, radish, water cress, &c. In the earliest notices of scurvy, mention is made of the efficacy of herbs of this class in its treatment. The strongest proof of this efficacy is to be found in the fact that the disease, when it occurred on land, uniformly disappeared during summer and autumn, and that it gradually became less frequent, as the consumption of vegetables increased.

There seems to be no country naturally destitute of remedies for the scurvy. The fruits of tropical and temperate climates are replaced in countries within the polar circle by herbs of almost equal virtue. We are told that in Greenland, where scurvy was formerly very common, the natives employed sorrel and scurvy-grass together; and that, by the use of these herbs, which were put into broths, the most advanced cases were speedily cured; and Sir Edward Parry, in the narrative of his first polar expedition, has given, from his own experience, an instance of the good effect of sorrel, when, in consequence of a serious

loss of lemon juice, from the bursting of the bottles by the frost, he was under the necessity of discontinuing the daily allowance of this article.

It appears that vegetables are most anti-scorbutic when eaten raw. Herbs in the form of salads are more efficacious than when boiled, or in any way prepared by heat; and their anti-scorbutic properties are entirely destroyed by drying. But when vegetables are preserved as pickles, their anti-scorbutic properties are retained. It was observed that Dutch ships were formerly much less subject to scurvy than our own; and in some instances, when our fleet has acted in concert with that of the Dutch, our sailors have become affected with scurvy, while the Dutch have continued free from it. This immunity on the part of the Dutch was owing to the use of sour krout, which was regularly supplied to their ships.

In 1780, sour krout was furnished to the navy of this country; and in the history of our fleets about that time, we meet with many proofs of its good effects. The allowance was two pounds a week to each man.

Sour krout is prepared in the following manner: the soundest and most solid cabbages sliced, as we slice cucumbers, are put into a barrel in layers, hand high; over each layer is strewed a handful of salt and caraway seeds; the whole is then rammed down, and the process repeated till the barrel is full, when a cover is put over it, and pressed down with a heavy weight. After standing some time in this state, the cabbage begins to ferment, and it is not till the fermentation has entirely ceased, that the barrel is finally shut up. Vinegar is not, as some have imagined, employed in the preparation of sour krout.

In Austria, and in several parts of Germany, people formerly ate sour turnip, which was prepared in the same manner as sour krout; in fact, most vegetables may be preserved by this process, and I most strongly recommend a trial of it, with scurvy-grass and sorrel, to navigators who may in future be compelled to winter in the Polar seas.

The fir tribe have long been noticed for their anti-scorbutic properties; and from a very early period, a decoction of fir tops

has been a popular remedy for scurvy in Sweden and other countries in the north of Europe. The common fir was first employed for this purpose, but other varieties of the tribe may be substituted for it; since they all, however various their mode of growth, seem to have similar medicinal virtues, and great efficacy in the prevention and cure of scurvy.

Onions, garlic, and vegetables of the same class, were at one time much used for the prevention of scurvy at sea; but they have been superseded by equally efficient and more economical means.

Potatoes, also, when raw, appear to be anti-scorbutic; and Sir Gilbert Blane informs us, that in 1780, they were used with advantage in the fleet. They will keep a considerable time in a warm climate, and in point of economy have an advantage over most articles employed as anti-scorbutics.

Fermented Liquors.—Spruce beer seems to be the most efficacious of fermented liquors. We have abundant proof that it is
not only an effectual preventive of scurvy, but an excellent
remedy; and it has this advantage, that materials for it can often
be procured at all seasons, in countries in high latitudes, where
the scarcity of fruits and vegetables renders a powerful anti-scorbutic valuable. These materials can also be carried about, and
used occasionally; a plan adopted by Capt. Cook with great advantage.

Malt liquors possess similar virtues. Frequent notices of the benefit derived from the use of small beer at sea, are to be met with in the writings of our naval physicians; and instances are also to be found, which afford evidence of the anti-scorbutic properties of cider.

Wine ranks next to spruce beer and malt liquors in efficacy, and it is perhaps to the habitual use of it that French fleets have been generally less subject to scurvy than our own. The superiority of wine over spirits in this respect, has been frequently remarked; and Sir Gilbert Blane was so convinced of it, that in a memorial presented to the Admiralty in 1781, he recommended the substitution of wine for rum in the victualing of the fleet.

Vinegar.—The good effects derived from the use of lemons

and other sour fruits, were naturally attributed to their most striking quality, acidity, and it was imagined that vinegar would prove of equal service. These expectations, however, have not been fully realized. I have met with many instances of the occurrence of scurvy in a high degree, in ships well supplied with vinegar, even in voyages of moderate duration; but in the cases in which I have witnessed the disease in the most aggravated form, the crews had no regular allowance of this article. From the facts that have fallen under my own notice, I am led to ascribe to it some anti-scorbutic virtue, greater perhaps than that of malt liquors or cider, but not sufficient to render it a substitute for lemon or lime juice. There is some discrepancy in the testimony of naval physicians respecting the anti-scorbutic properties of vinegar, which renders it probable that these vary in some degree with the material from which the vinegar is prepared.

All the substances which I have mentioned as preventives of scurvy, are derived from the vegetable kingdom; and, it is probable that anti-scorbutic properties are possessed, exclusively, by substances of vegetable origin. These properties exist in very different degrees in different classes of vegetables and fruit; but, in the lowest degree, if at all, in those which are farinaceous. Fresh leavened bread has, indeed, been supposed to be highly anti-scorbutic, and has, in consequence, been recommended by many writers on scurvy. But the good effects ascribed to its use have been witnessed in sailors on their return from a long voyage, who were supplied, not only with bread, but also with vegetables, the efficacy of which was probably not duly appreciated. The anti-scorbutic properties ascribed to bread, seem incompatible with the fact, of which I could bring many proofs, that scurvy may occur in persons with whom bread forms the main article of subsistence.

Fresh Meat.—The belief that scurvy arises from the use of salt, led to the opinion that it may be prevented or cured by fresh meat. I have already stated that this opinion is erroneous; it is, however, still held by persons by whom it is very important that correct notions on this subject should be entertained. I have known the most fatal effects result from the false ideas of cap-

tains of merchant vessels on this point. During the course of the present year, the captain of a vessel trading to the Mauritius, furnished his men, while they staid at the island, with a plentiful supply of fresh beef, which being imported from Madagascar, is procured at considerable expense; but he neglected to provide them with vegetables or fruits, which abound in the island, and are sold at a price scarcely worth naming. The consequence was, that scurvy broke out soon after they set sail; and before the vessel arrived in this country, one half of the men before the mast had died of it, and the rest were totally disabled.

Symptoms of Scurvy.—The first indication of the approach of scurvy is generally a change in the complexion, which loses its healthy tint, and becomes pale, slightly sallow, and dusky. This change is attended with lowness of spirits, and with aversion to any kind of exercise, which quickly induces fatigue; and the sailor complains of pains, especially in the legs and loins, like those produced by over exertion.

The gums soon become sore, and bleed on the slightest touch. On examination, they are found to be swelled and spongy, and of a dark red color, especially at their edges, where they are in contact with the teeth.

Purple spots appear on the skin, particularly of the legs and thighs, but often also on the arms or trunk. These spots, which are sometimes very numerous, are generally small and circular, resembling flea-bites; but often, especially when the disease is a little advanced, we meet with other spots as large as the palm of the hand, sometimes much larger, in which the skin is of a variegated violet and green tint, and which resemble, in every respect, the marks produced by a severe bruise. These bruise-like marks occur without the infliction of any blow, or at least, of one sufficient to attract the sailor's attention, and often surround an old scar, or appear on a part which a long time previously has been the seat of some injury.

Another symptom indicative of scurvy, is a swelling of the calf or ham of one or both legs, which causes stiffness and contraction of the knee-joint. The parts which are thus swelled, are painful when pressed or moved, and are exceedingly hard, so that they do not yield to the pressure of the finger. The skin covering them is thickened and adherent to the parts beneath, from which a fold of it cannot be pinched up; it sometimes retains its natural color, but more commonly presents the appearance of a bruise.

In advanced stages of the disease, the complexion has a more dingy and somewhat brownish hue; the gums are more swelled and more livid, forming, in some cases, a black spongy mass, which completely covers the teeth; the teeth themselves become loose and frequently drop out; and the debility is such, that the slightest exertion, even the erect posture, causes breathlessness and palpitation, and not unfrequently an alarming faintness.

Treatment.—After the details into which I have entered respecting the cause and the prevention of scurvy, little remains to be said of its treatment. The essential point is to give, in sufficient quantity, those articles of vegetable food, which have been distinguished for their anti-scorbutic qualities. Oranges, lemons, or fruits of that class, if they can be procured, should be preferred. The salutary effect of them is extraordinary, and such as would scarcely be imagined by persons who have not witnessed it.

If the state of the gums be such as to prevent the patient from masticating, he should be kept for two or three days on milk diet or on soups, in addition to the anti-scorbutics; at the end of this time, or at the commencement, if the case be less severe, his diet should consist of fresh animal food and vegetables, especially in the form of salads; and as long as he continues very feeble, wine, porter or ale should be given him.

This is all the treatment required for the cure of scurvy.

Bleeding should never be had recourse to, although feverishness or severe pain may seem to render it advisable. It always produces ill effects, and, in advanced stages of the disease, persons do not survive it.

Blisters are apt, in scorbutic persons, to produce mortification, and for this reason we should abstain from their employment.

Mercury, in every form, should be scrupulously avoided. In

every instance it aggravates the disease; and very small quantities have been known to produce a dangerous salivation.

The points which I have endeavored to establish in the preceding pages, are—

- 1. That scurvy, which, for a long time has been almost unknown in the navy, is still very common in the merchant ships of this country—especially in those trading with the Mauritius, Australia, China, and the different ports of India.
- 2. That the symptoms by which this disease may be recognized are—a pale, sallow, dusky complexion; a listless, desponding manner; swelled and spongy gums, of a dark red color, and apt to bleed on the slightest touch; purple spots and bruise-like marks, particularly on the legs; and swelling and hardness of the calf or ham, with stiffness and contraction of the knee-joint.
- 3. That scurvy is not attributable to the use of salt meat, to sea air, or to any marine agency, but that it is occasioned by prolonged abstinence from any succulent vegetables or fruits, or their preserved juices, as an articlé of food; and that by the use of these it may be prevented or cured.
- 4. That probably all succulent vegetables and fruits, which are wholesome, are more or less anti-scorbutic; and that generally those which are the most succulent are the most efficacious.
- 5. That the anti-scorbutic property resides in the juices of the plant, and that it is in some degree impaired by the action of a strong heat; and therefore,

That the juices of fruits, as lemons, limes, apples, for sea use, should be kept good by the addition of a certain proportion of spirit, without the aid of heat:

That vegetables, for the same purpose, should be preserved in the form of pickles, as in the preparation of sour krout.

6. That no vessel should be sent on a voyage of several months' duration, without a supply of lemon or lime-juice; and that on the arrival of a vessel in port after a long voyage, the captain should, if possible, provide his men with fresh succulent vegetables or fruits.

As in a subject like the present, particular examples are more

impressive than general statements, I have subjoined the details of a case which occurred during the course of the past year. This case is certainly the worst I have ever met with; but I have chosen it, not on that account, but from its being well adapted to show the circumstances which have the chief influence in producing scurvy.

A vessel sailed from England on the 26th of August, and arrived at the Mauritius on the 1st of December; she again set sail for England on the 17th of the January following, and entered the port of London on the 1st of June. The crew were healthy when they left the Mauritius, and consisted of sixteen persons, of whom eight were before the mast, and formed one mess; the cook, carpenter, second mate and boatswain, another mess; the captain, the first mate, the owner's nephew, (a boy) and the steward, formed the remainder of the crew. Of the eight men before the mast, four died during the passage home, one near St. Helena, of dysentery, and three, after passing the line, before their arrival in this country, of scurvy. Of the remaining four, three were brought to the Dreadnought soon after they arrived in port, the fourth was taken to his friends; all these were in a dreadful condition from scurvy; but they all recovered, with the exception of one who died soon after he was brought to the Dreadnought. Of the four who formed the second mess, one was brought to the Dreadnought, the others went to their homes; all were in a very bad condition. Scurvy showed itself in these men about six or seven weeks after they left the Mauritius, and all of them, except two, had been confined to their hammocks since the latter part of April; of these two, one had been confined to his hammock only ten days; the other, though incapable of doing duty, continued to crawl about until they arrived in port. For ten days before their arrival, the vessel was worked entirely by the captain, steward, first mate, and boy, who messed together in the captain's cabin, and continued free from scurvy. The weather, during the voyage homeward, was fine; the vessel, a good one; and the work of the men before they became affected with scurvy, was not severe. Their diet, after they left the Mauritius, consisted of salt beef or pork, with biscuit, and tea, for breakfast; beef two days, and pork one day, alternately, with biscuit for dinner; and during the first half of the voyage, flour, in puddings, twice a week, and pea soup twice a week. One glass of grog was given daily to each man nearly all the passage. They had no vinegar, lemon or lime juice. The salt provisions were of bad quality, but not of the worst; and the diet was as good in every respect in coming home as in going out, yet none of the crew showed any symptoms of scurvy in their passage outward. While in the Mauritius, each man had two pounds of fresh beef daily, but no fruits or vegetables of any description.

The severity of the disease in this instance must be ascribed solely to complete and prolonged abstinence from vegetable juices. From the time of their leaving England, the men had been without vinegar, lemon or lime juice; and during their stay at the Mauritius, they had no fresh vegetables or fruits of any kind. In other respects they were favorably circumstanced. They left this country in autumn—the best season, as regards scurvy, for the commencement of a long voyage; their vessel was a good one; and, during the early part of the voyage homewards, the weather was fine, and their work easy. The salt provisions were indeed of bad quality, but all the men agreed that they had met with worse; and in addition to the salt meat and biscuit, they had flour twice a week, pea soup twice a week, and a daily allowance of grog. It is worthy of remark, that none of the men exhibited symptoms of scurvy in their passage out, which lasted between three and four months, yet all of them became affected with it in less than two months after they left the Mauritius, although the provisions were quite as good when they were returning as when they were going there, and during their stay at the island, they had been abundantly supplied with fresh animal food. This is explained by the circumstance that to produce scurvy there must be abstinence from vegetable juices, and this abstinence must be prolonged. Fresh animal food has, as I have before remarked, very little effect, either in preventing or curing it; and, consequently, the time they staid at the Mauritius may be considered as so much time spent at sea.

I have since met with an instance in which the crew of a ves-

sel, likewise from the Mauritius, were reduced by scurvy to a condition almost as bad as in the case of which I have given the details. In both instances the disease was owing, in part, to the want of lemon or lime juice during the voyage; in part, to the circumstance that while they remained at Mauritius, they were unprovided with fresh vegetables or fruits.

[Among the remedies for scurvy enumerated in the foregoing article, no mention is made of sugar, although this substance we believe is generally conceded by physicians to be an anti-scorbutic. We find in Porter's work upon the culture and manufacture of sugar, a case quoted, in which that article was found singularly efficacious in restoring to health a ship's crew that had been seized with scurvy. "A vessel came from the West Indies, heavily laden with sugar. A calm, that had not been foreseen, prolonged the passage till all their provisions were exhausted. The sugar was the only resource left to the crew; and nourished by it, they at length arrived safely in port. Some sailors had died of scurvy during the voyage, and many were threatened with death from the same cruel malady. The scurvy ceased when its victims were from necessity reduced to the sugar diet, and the remedy was at the same time an agreeable aliment."]

La Gazette de Santé, No. XLIV, 1785.

# MEDICAL LITERATURE.

### RETROSPECTIVE REVIEW.

### HISTORY OF JEWISH PHYSICIANS.\*

BY E. CARMOLY.

Ils étaient nos facteurs et nos banquiers, avant que nous sussions lire: ils furent aussi nos premiers médecins. Cabanis Révolution de la Médecine, ch. II. § vii.

§ I.

### ORIGIN OF MEDICINE.

The origin of the healing art, like the beginning of every thing human, cannot be certainly determined. We know only that at the earliest periods of society, medicine was already practised with a certain reputation; this will be evident from the first view of the earliest arts, as medicine takes rank along with them.†

It becomes us, however, to declare, that we find nothing worthy of attention before the time of Moses, the greatest of prophets and the most sublime of legislators. We should then seek in the sacred writings for the first traces of medicine.

<sup>\*</sup>We have translated this article from the Bulletin Medical Belge, contained in the Encyclographie des Sciences Medicales, and feel assured it will interest the readers of the Journal.

<sup>†</sup> CABANIS Révolut. de la Médecine, chap. ii. sec. 1, p. 38.

Certain commentators on the Holy Scripture have concluded from what is said in Genesis,\* that God caused all animals to appear before Adam, that he might name them, that therefore the father of the human race was at the same time gifted with a perfect knowledge of all their qualities as well as those of all created things; from whence it is inferred that Adam could not have been ignorant of their different applications in medicine. These authors rely particularly upon this passage in Ecclesiasticus:† "Honor a physician with the honor due unto him, for the uses which ye may have of him: for the Lord hath created him." Without engaging in endless discussions, let us confine our attention to what is actually contained in the text of the Holy Scriptures.

We find that Egypt, the ancient cradle of wisdom, was in possession of the art of embalming the body at the time of Joseph.‡ This custom would imply in the Egyptians some idea of anatomy, and would early give them knowledge in reference to the seat of diseases, and the derangements produced by them.

The question has been often discussed, whether the Hebrews taught the healing art to the Egyptians, or learned it from them. On this point, it will be sufficient to remark, that the two nations having dwelt a long time together, would necessarily interchange their science and knowledge.

## § II.

#### MEDICINE OF MOSES.

However it may be, a great number of passages in the Holy Scriptures render it evident that Moses had very enlarged ideas of medicine as well as of all other human knowledge. He has given decided proofs of this in that part of the law which contains the Hygenic directions, the signs of the white leprosy, and the means to cure it. He lays down the marks of difference of the invasion or existence of true leprosy, and that which should

cause no suspicion.\* He advances a very sound judgment on the critical nature of the scabs and the eruptions which are observed in this disease, upon the complication of the incurable white leprosy,† and upon many other circumstances of this formidable malady.‡ Modern physicians have sometimes, but not often, had the opportunity of testing with how much exactness this great man has written.§ The healing of the leprosy, as of all other diseases, is the immediate effect of the omnipotence of the Deity, who sent them upon all who had offended, and afterwards healed them when he was propitiated by their prayers.

At a former period, Abraham, the father of the people of Israel, prayed the Eternal to heal Abimelech, his wife, and his servants, whom he had struck on account of Sarah.

When Miriam, the sister of Moses, murmured against the great lawgiver, God struck her with leprosy, from which she was only delivered in consequence of Moses' prayer to God to heal her. The people having revolted, an epidemic appeared, which destroyed fourteen thousand seven hundred men, and which prevailed until the high priest, Aaron, offered up incense of atonement.

At Marah, God announced by Moses to the people, that if they would keep all his laws, they should never be attacked by any of the plagues of Egypt, "for I am the Lord that healeth thee."\*\*
Finally, God pronounces a curse on all those who break his laws, and threatens them with diseases and all kinds of misfortunes.

## § III.

### MEDICINE IN THE HANDS OF THE PRIESTS.

The priests appear to have been the first physicians among the Hebrews. It was to the priests of the sons of Levi, that those affected with leprosy applied for treatment. They decided the

\* Leviticus xiii. 3 to 20. † Leviticus xiii. 6. ‡ Leviticus xiii. 10. § Hensler. Vom abendlaudische Aussatze, page 105, &c. | Genesis xx. 17, 18. ¶ Numbers xii. 10, &c. \*\* Exodus xv. 26.

condition of those attacked by this disease. They seeluded them, purified the body, and made expiatory sacrifices, the offerings of which were birds, lambs and oil.

The practice of medicine remained associated with the priesthood, even after the Israelites became masters of Palestine. Diseases were always considered as occasioned directly by the Most High, who revealed his supreme will to the high priests. They sacrificed victims to appease his wrath, and to arrest the diseases for which they were offered in expiation. When the sacrifices were agreeable to him, the diseases were seen to disappear. The Philistines having, in the time of Samuel, seized the ark of the covenant, were struck with diseases, from which they could only be delivered by consecrating to the Eternal golden images of their excrescences.\* One look cast by the Bethlehemites upon the holy ark, brought upon them a most desolating plague, which slew a great number. † At a still later period, Saul being attacked with a deep melancholy, he attributed it to an evil spirit sent by God to torment the king, which could only be expelled by the delightful sounds of the harp of the son of Jesse. I The plague, which broke out in the reign of David, as a punishment for the numbering of the people ordered by this prince, it is evident to us were intended to teach the Hebrews that their disease was a chastisement inflicted by heaven, to which it alone could cause a termination.

## § IV.

#### SOLOMON.

At length Solomon appeared; the vast knowledge of this monarch does not less deserve our admiration, than his taste, refined by commerce and the fine arts, contributed to the prosperity of his people. "His wisdom," saith the Holy Scriptures, "excelled the wisdom of all the children of the east country, and all the wisdom of Egypt. For he was wiser than all men; than Ethan the Ezrahite, and Heman and Chalcol, and Darda, the

1841.7

sons of Mahol; and his fame was in all the nations round about; and he spake of trees from the cedar tree that is in Lebanon, to the hyssop that springeth out of the wall. He knew also the history of quadrupeds, of birds, of fish, and insects." It is then not surprising that tradition attributes to him a work which taught how to cure diseases by natural means, which Ezekias is said to have destroyed, because the use of the remedies laid down by it would be injurious to the interest of the Levites, who healed diseases by expiatory sacrifices.\* Let this be as it may, Solomon has always been held in great reverence throughout the East as a very great physician. The medical works attributed to him bore his fame even to the Arabians.† According to some of the authors of this nation, Solomon has left a history of plants and animals, besides a number of books on all the physical sciences.

Notwithstanding the great number of these works, it is difficult to discover exactly the opinion of Solomon on the real art of medicine, for he had, according to the Arabic writers, but a very vague idea of what was necessary to constitute a physician. We would suppose that he is the person upon whom they bestowed the title of magician.

# § V.

### MEDICINE AS CULTIVATED BY THE PROPHETS.

After the death of Solomon, the healing art fell into the hands of the prophets. These messengers of the Lord invoked diseases when God was offended, and they alone had the power to heal them. Jeroboam having treated one of the servants of the Lord with disrespect, behold his hand became withered; and in order to be delivered from this paralysis, he was obliged to beseech the prophet to intercede in his favor before the Eternal.‡

<sup>\*</sup> Talmud. Book Pesachim, chap. 10, p. 56. Suidas, word—Eçenias. † Alleman, Schaar Ha Cheschek Livourne, 1796, p. 17. Kerem Hemed, book II., p. 52.

<sup>‡</sup> I. Kings xiii.

The son of this prince having fallen sick, and the queen being anxious to know what should be the issue of the disease, she went to Shiloh to consult the Prophet Ahijah, who predicted the approaching death of her child.\*

But he who acquired the most reputation by his prophetical cures, was Elias, who restored to life the child of a widow of Zarepphath, who was in a lethargic condition resembling death.† He also foretold to king Jehoram a disease of the intestines in which they were mortified and appeared to be discharged from the body,‡ and he announced his approaching death to Ahaziah.§

Elisha inherited the spirit of the prophet Elijah. He cured the son of the Shunammite woman, and relieved Naaman the Assyrian general, of leprosy, by ordering him to bathe in the waters of Jordan. The prophet Isaiah, also, cured king Hezekiah of a glandular affection, by the application of a cataplasm of figs.\*\*

When king Asa was attacked with gout, he neglected to consult the prophet, but applied to the ordinary physicians, the Levites; and after languishing for two years, he died, and his death was attributed to his not having called upon the aid of the Lord.††

King Uzziah was also struck with leprosy for attempting to burn incense in the temple, and resisting the priests, who represented to him the consequences of his conduct.

The prophet Jeremiah asks, "Is there no physician in Gilead?" §§ and Ezekiel || points out the means used in his time for the treatment of fractures: "Son of man, I have broken the arm of Pharaoh, king of Egypt; and lo! it shall not be bound up, to be healed, to put a roller to bind it, to make it strong to hold the sword."

```
* I. Kings xiv. † I. Kings xvii. † II. Chronicles xxi. § II. Kings i. || II. Kings iv. ¶ II. Kings v. || ** II. Kings xx. Compare Josephus Antiq. Jud. lib. xc. 12. † † II. Chronicles, xvi. 12. || † II. Chronicles, xxvi. 19. || Ezekiel xxx. 21.
```

## § VI.

### OTHER HEBREW PHYSICIANS.

It appears from Isaiah,\* that it was incumbent upon the chief men of Israel to be instructed in the secrets of the healing art. "In that time," says he, "a man shall lay hold of his brother, and say unto him, Thou hast clothes—be thou our ruler, and heal us of our ruin. He will reply and say, I am not a physician—do not appoint me the ruler of the people." Jeremiah,† Hosea,‡ and Zachariah,§ confirm this opinion. They express themselves in a manner that proves that ignorance of medicine was almost an exclusion from sovereign power.

On the other hand there is no doubt that this science was cultivated by the doctors of the law, of whom Esdras, the scribe, may be considered the chief. The doctors of the law have always been the depositories of it, and esteemed it as appertaining exclusively to their province. Seeing the influence and consideration that their knowledge gave them with the public, they shrouded it in mystery, and took all possible precaution to prevent the admission of other classes of the community.

But did they cultivate this science in a methodical manner, and is it evident that what they have done gave it a perceptible progress? We think not; at least they have handed down to us nothing by which we could judge. Nevertheless, according to tradition, Esdras and Nehemiah were very well versed in the virtues of herbs and the qualities of roots. The sentences of Jesus, the son of Sirach, prove likewise the high value given to medicine by the Jewish doctors during the second temple. "Honor the physician with the honor due unto him, for the uses which ye may have of him; for of the Most High cometh healing, and he shall receive honor of the king. The skill of the physician shall lift up his head; and in the sight of great men he

<sup>\*</sup> Isaiah iii. 6. Upon reference to the text of Isaiah, we doubt whether the author is borne out by the reference. We have, however, given him a fair translation.

<sup>†</sup> Jeremiah vi. 14. ‡ Hosea v. 13. § Zachariah xi. 16.

1841.]

shall be in admiration. The Lord hath created medicines out of the earth, and he that is wise will not abhor them. \* \* My son, in thy sickness be not negligent, but pray unto the Lord and he will make thee whole. \* \* Then give place to the physician, for the Lord hath created him: let him not go from thee, for thou hast need of him."\*

## § VII.

### THE ESSENIANS.

Finally, at this time, an entire sect of the Jews were celebrated for their skill in the treatment of diseases. They were called indiscriminately by the name of Essenians, or by that of Therapeutists, signifying healers—physicians. The most remarkable man among them was Theodore, the physician, a man of great merit, who flourished at Alexandria.†

The Essenians, distinguished for their pure and amiable morality, cultivated medicine not only to make themselves more acceptable, but to discover the means of perfecting the mental qualities, by rendering the body most healthy. Apostles of their doctrines, they confirmed them by a great number of remarkable cures.

The members of this sect were esteemed as saints and physicians, who could by faith and words alone, heal diseases. This plan of driving unclean spirits from the body of the diseased by their conjurations, was also pursued at that time by the Pharisees. Josephus‡ relates a case of which he was an eye witness, of the cure of one possessed with an unclean spirit, produced by a certain Eleazer, in the presence of the emperor Vespasian. The physician introduced into the nose of the sick person, a root recommended in similar cases by king Solomon, which God had endowed with this property: he pronounced, besides, the name of this ancient king of Israel, and the magical formula which he had laid down.

<sup>\*</sup> Ecclesiasticus xxxviii. 1--15. † Mischna. Treatise Bechorotth, cap. iv. 4. ‡ Josephus Ant. Jud. Lib. VIII. chap. x. 11

# § VIII.

### AKIBA AND ISMAEL.

The destruction of Jerusalem by Titus, did not affect learning much among the Jews. Medicine particularly, was then taught with great care. They enriched it with many important discoveries, reported by various ancient authors. Celsus, among others, refers to two medicines of the Jewish physicians.\*

Among the physicians of the Jews, there were two particularly distinguished, Akiba and Ismael.

These two doctors were one day walking in the public places of the holy city; a stranger came and placed himself near them. Soon afterwards they were addressed by a sick person, in these words: "My masters, I beseech you to give me the remedies to relieve me of my disease." They advised him of a remedy. "Take this," said they, "until you are entirely cured."

The patient had hardly departed, when the stranger, who had placed himself near the physicians, asked of them, "Who had afflicted this man with such a disease?" "God," replied they, when he forthwith commenced the following conversation:—
"You say God, and you assume to yourselves a thing which does not belong to you; He afflicts and you profess to heal."

"What is your occupation?" said the physician.

"I am a husbandman, as this reaping hook shows."

"Who created the earth, which produces fruits?"

"God."

"Wherefore do you appropriate to yourself a thing that does not belong to you? He created the earth, and you reap the fruits."

\*A. C. Celsus, De re Medica Lib. V., cap. 19 and 22. These are both plasters. One for fracture, and should consist of the following ingredients: salt, scales of red copper, calcined copper, ammoniacum, thymiama, soot of frankincense, dry resin, calophonian resin, wax, veal suet, vinegar and oil. This, Celsus calls Judeus' plaster. The other is a composition also by Judeus, formed of two parts of lime and a pound of the reddest nitre, which are mixed with the urine of a young boy, till they be of the consistence of strigment. The parts on which this is spread, must be moistened. Vide Dr. Greives' Translation of Celsus, London, 1838, p. 228, 237.

1841.]

"But see, if I had not labored, sowed, manured and weeded, the earth would have produced nothing."

"True, sir, but one of your occupation ought to remember what says the scriptures, 'the life of man is as an herb, it flourishes as a flower of the field;' besides the plant will not grow unless it is manured and cultivated, and even if it does grow, it will die if it is not refreshed with water and otherwise attended to. In the same manner, the body of the patient is the plant, the compost is the medicine, and the laborer is the physician."

"Excuse me; I hope you will not be offended; I am satisfied."
"The whole body is dependent on its respective parts; one cannot exist without the other. When they become weakened, it decays and dies, like a house with four walls—one of which giving way, the whole house tumbles into ruins."\*

## § IX.

### DESCRIPTION OF A MAD DOG.

The progress which medicine made at that time in the Jewish schools, is evident by the description of many diseases which they have left us. We refer among others, to that of a mad dog described in the following manner.† The signs which mark a mad dog, are the following: His mouth is open; the saliva issues from his mouth; his ears droop; his tail hangs between his legs; he runs sideways, and the dogs bark at him; others say that he barks himself, and that his voice is very weak. A German servant of the Rabbi Jehowda, was bitten by a mad dog; they gave him the diaphragm of a dog to eat, but it did him no good; and no man has appeared who could say that he has seen a man live who was bitten by a mad dog.

It is proper in this place to reply to Severin Pineau, who endeavors to prove in his excellent treatise on the separation of the bones of the pelvis, (which he published in 1579,) by a passage

<sup>\*</sup> Medrasch, Samuel, chap. IV. Medrasch. Themura, chap. II. † Talmud. Treatise Berachoth, chap. v.

from the Book of Zohar, that this fact was already known to the Jews for seventeen hundred years, and that Avicenna, who had certainly read this cabalistical book, had adopted upon the separation of the bones of the pelvis, the same opinion, and had expressed it in very nearly the same terms, that the book of Zohar has been falsely attributed to Simeon ben Jochai, a doctor of the second century; but it, in fact, is the work of Moses of Leon, a Rabbi of the third century, which we have proved elsewhere. This last author, who lived in Spain, has borrowed this observation of the Arabic author, as he has done those of many others, to make his book interesting. He has imitated the style of the ancient doctors, and palmed off his book as a work of antiquity. But it is soon discoverable by its contents, that it is only the work of a modern Rabbi.

## § X.

### HANNINA, SAMUEL, RAB.

However limited and imperfect the medical knowledge of the Jews at the third century, may appear to us, if we compare it with the actual condition of medicine, we cannot deny the tribute of admiration to the discoveries which they have made, and the great eminence to which they had carried the healing art, notwithstanding the state of ignorance which prevailed in reference to the science. We shall only speak of three physicians of that period. Hannina is the first of all the physicians of his nation. He placed upon his seal a branch of the palm tree, a symbol of true medicine.\* He became the physician of Jehuda, son of Simeon, called by distinction, Rabbi Hanaschi Hakadosh, that is to say, master, prince and saint, who died in the year 205. The Talmud refers to our physician as distinguished at that period.†

The second, Samuel, rendered himself remarkable among the most celebrated physicians of his time. He is generally styled

<sup>\*</sup> Talmud. Treatise Chulin, cap. ix.
† Treatise Chulin, cap. 1, p. 7. Treatise Ioma, p. 49.

Iarchinai, the astronomer, on account of his great knowledge in the science of the stars. Samuel, after having practised medicine in Palestine, established himself at Neharda, (Hardith) a city of Lower Mesopotamia, which he rendered famous by his miraculous cures. He was a good accoucheur, an excellent oculist, and cured the celebrated Iehuda, the prince, with a certain remedy which bears his name, the collyrium of Samuel.\* His medical aphorisms are well known to the Talmudists. + Samuel appears in the sandy plains of medicine like that bountiful river which causes fertility through a part of the fields of Egypt. With what friendship does he hold the hand of Rab! Samuel and Rab were always closely united. A sympathy of disposition and character, an unalterable attachment, the same fondness for study, the same love for the sciences, distinguished these two friends. Whilst the first rendered himself immortal by the theory as well as the practice of medicine, the other devoted himself to the study of anatomy, so much neglected up to that period. He devoted a considerable sum for the purchase of subjects, in order that he might prosecute his anatomical researches. T But notwithstanding his researches, he described at that period only two hundred and forty-eight parts in man; but so little did they understand the true value of his science that they made use after his death, in 243, of the earth of his tomb to cure a fever.§

# § XI.

### ABBA OUMNA.

The Jewish physicians were numerous during the fourth century. We shall speak principally of Abba Oumna. This physician had a great reputation on account of his piety, his philanthropy, and his experience in his art. He made no distinction

<sup>\*</sup> Talmud. Treatise Sabbath, p. 108.

<sup>†</sup> See Talmud, Treatise Sabbath, p. 51, 78, 108, 133, 167. Treatise Ioma, p. 78. Treatise Thanith, p. 11. Treatise Iabomoth, 34. Treatise Chulin, p. 40. Treatise Sota, p. 10. Treatise Nedarim, p. 71. Treatise Baba Mezia, p. 107. Treatise Abodasara, p. 30, 31. Treatise Nidda, p. 13, 17, 25, 37, &c.

<sup>‡</sup> Talmud. Treatise Bachoroth V. § Talmud. Treatise Sanhedrin, p. 47.

between the poor and the rich; he gave his services to those distinguished for learning, exacting but a very trifling recompense for his services. He considered them as brothers and fellow laborers, whose labors were not less important than his own, since their efforts were directed to the healing of the maladies of the mind.

Abba Oumna did not wish to discourage those who might stand in need of his skill, and who might feel ashamed at offering him too trifling a fee. He therefore caused to be hung up in his antichamber, a box, in which each one might deposite whatever he deemed proper. Nevertheless, his reputation extended more and more every day; and Abbaye, one of the most wise and distinguished men of that age, having heard so much of him, wished to know if all that had been related of so learned a man, was true. He therefore sent to him two of his disciples who were quite sick. The physician received them with great kindness, administered to their diseases, and besides, invited them to pass the night in his house. This they did very willingly, and remained until the evening of the next day, when they came to take leave of him. Before departing, they possessed themselves of the carpet which covered the apartment where they had passed the night. They took it up and waited until their kind host should come to the place where they were standing, as if they had the carpet for sale. They asked of him how much it was worth.

Abbe Oumna mentioned a certain sum.

"Do you not think, Doctor," replied the disciples, "that it is worth more?"

"No," replied the physician, "for it is exactly the sum that I paid for a carpet precisely like it."

"Noble man," replied they, "it is from you that we have taken it. Tell us fairly, when you perceived that it was missing, had you not a bad opinion of us?"

"Certainly not," was the reply of this generous man. "Do you indeed believe that a child of Israel could think ill of any one, and form an unfavorable judgment of his neighbor, for one fault that he might have committed? I felt well assured that no use would be made of the carpet injurious to any one; therefore,

1841.]

permit things to remain as they are; sell the carpet, and give the money to the poor."

The disciples obeyed his request, and promised to do as he directed, and left him with expressions of their respect and gratitude.

This report added to his former brilliant reputation.\* Nevertheless, the most noble trait of character in this celebrated physician, was that he never would receive a fee from the poor, and in respect of whom, he neglected nothing during their illness which could contribute to their recovery. When by his skill and attention he had re-established their health, he was accustomed to give them money, and to say, "Now, my children, go buy bread and meat, for these are the best and the only remedies that you now require."

## § XII.

### MEDICINE OF THE TALMUD.

The Talmud, that Encyclopædiacal Library, was written about the middle of the fifth century. Among a great number of remarkable observations upon medicine that this ancient work contains, and of which we have already had occasion to speak, we will content ourselves with a reference to the following:

Febrile movements, they considered the efforts of nature which tended to expel morbific matter and restore health. They gave a very good explanation of the halting of the posterior members in a lamb, which they attributed to a callosity which had formed around the spinal marrow. It said also that the best remedy for nausea was an emetic; that a sudden change of diet was injurious even where this was to one of a better quality; that milk fresh from the udder was the best; that a person should take more solid than liquid food before forty years of age, and after this period of life more liquid than solid; finally it rejected dubious remedies which deceive the hopes of those who make trial of them.†

<sup>\*</sup> Talmud. Treatise Taanith, p. 21.

<sup>†</sup> Gunzburger, Medicine ex Talmudicis, Gottingen, 1743, 4to.

Nevertheless, all the remedies laid down in the Talmud, are not of the same character; there are a number which are not based on observation and have no other origin than the prejudices of the age in which they were invented; in that class we rank all those which are found in the Treatises Sabbath and Ghittin.\* We also find in those ponderous works of aphorisms those which equally bear the character of the time in which they were written, for example such as the following: a little bread and wine taken fasting preserved the liver from sixty-three different diseases. That it is a certain sign of sanguineous plethora when one dreams of a comb of a cock. Finally, it was generally believed in the age of the Talmud, that the Rabbis had the power to cure diseases by the laying on of hands and fasting and prayer.

Besides, who is ignorant of the miraculous cures performed by the Rabbis Iochanan and Hannina,† we can thus easily explain the dislike which some of these doctors bear to the ordinary practitioners of medicine.‡

We will finish this paragraph by a quotation from the Talmud, more remarkable for its point than its gallantry.

"Any disease, provided the bowels remain open; any kind of pain, provided the heart remain unaffected; any kind of uneasiness, provided the head is not attacked, all manner of evils, except it be a bad woman."

# § XIII.

### DECLINE OF MEDICINE.

From the fifth let us pass to the seventh century; the interval between those two epochs, presents no physician deserving of occupying our attention; the fall of the Persian empire, the conquest of the Arabians and the numerous revolutions of which those events were either the cause or consequence, disturbed the

quiet of the Oriental Academies, and produced a decline in medicine as well as all the other sciences cultivated in those schools.

The art of healing very soon became nothing more than the practice of experience, reduced to precepts without any idea of theory.

In the midst of this darkness the Cabala reigned over learning. A great number of disciples devoted their attention only to this occult science, a mixture of Pythagorism, Platonism and the theosophy of Zoroaster, combined with the Jewish theology which had originated in the Alexandrian school, but which was so mixed up with their own ideas of traditions, that it ultimately lost all traces of its former origin and passed as their own doctrine.

Soon there appeared works decorated with the celebrated names of antiquity, in which was explained this mystical doctrine. There was one among others published at one time under the name of the patriarch Abraham, and a short time after that another under that of Akiba, bearing the title of Sefer Jezirah. A book with this title was in existence as late as the fifth century, since it is quoted by the Talmud.\*

At the same period there is attributed to Ismael ben Elisha, a number of similar writings issuing from the pen of the disciples of sophistry. Their various works explain all the systems of emanations of Zoroaster. From the infinite God En-Sof, issued ten angels Esser Sefirot, who made the first world Olam Azilot. Besides the first world there were also three others, emanations from eternity in concentrical circles, viz. the created world Olam Beria, the formed world Olam Ieziré, and the constructed world Olam Assié, between which there existed such a relation that all which happened in the last had already existed in similitude in the first.

When they treated a disease the object aimed at was to put in action the corresponding powers of the superior worlds; which could only be accomplished by one who by a study of the Cabala had obtained the knowledge of those worlds, and who by his piety and contemplation had become worthy of holding communion with the celestial powers. These qualities were deemed much more necessary for the practice of medicine than all terrestrial knowledge which is so often found deficient.

## § XIV.

### MASER DJAWAH.

Although the number of learned Israelites had much diminished during the conquest of Persia by the Saracens, and notwithstanding their books as well as those of the Persians were destroyed by fire and water by the order of Omar,\* the taste for study was not entirely destroyed, but it soon revived, and medicine resumed its ancient splendor. Maser Djawah Ebn Djeldjal, of Basra, appeared. This celebrated physician was one of those remarkable geniuses that nature appears to raise up from time to time to revolutionize the sciences. This able physician who at the same time was a good poet, judicious critic, and profound philosopher, taught the Arabians the arts and sciences; he prevailed on the Caliph Moawia, the first, whose physician he was, to cause works which were written in foreign languages to be translated, to put them in the power of the whole world. Many Greek books, particularly on chemistry, were then translated from the Greek into the Arabic by Kalid, son of Yesid, son of Moawia, his pupil.†

<sup>\* &</sup>quot;When the Mussulmen had conquered the provinces of Persia," says Ebn Khalican in his historical Prelegomena, "and many of their books had fallen into the power of their conquerors, Saad, son of Abou Wakkas, wrote to Omar, asking permission to transport them among the Mussulmen; the reply of the Caliph was 'cast them into the river, for if they contain any thing which is useful to guide us, God has already directed us by something which is very superior to that; but if on the other hand they contain any thing which would lead us astray, God will preserve us from it by the Koran;' all the books were therefore cast into the water and fire."

<sup>†</sup> Consult in reference to this learned Arabian, who died in the 82d year of the Hegira (701) Aboulfeda Annel Mosl, Book i, p. 425.

He himself had already translated, in 683, the *Pandects* of *Haroun*, a physician of Alexandria, a cotemporary of Paulus Æginetis.\*

In the work which he translated from the Greek into the Syriac language, there is a disquisition on the small pox. The first description of which is not due to Mahomed ben Zazaria Razi, as is generally supposed.

We do not possess at the present day these pandects, but Rhazes has preserved for us some fragments. The same fate has befallen his other works, which the learned Arabians in the early periods of their civilization were anxious to quote and to comment on.

Rhazes particularly relies upon their authority on every page, he quotes them on the modus operandi of medicines, on inflammation of the stomach, paralysis, jaundice, hernia, epilepsy, and the signs of death.†

At the period that Maser Djawah rendered such great services to his art, some other Hebrew physicians established among the Nestorians a celebrated school of medicine at Djondisabour in Khusistan.‡ Students flocked there from all parts to listen to the most celebrated masters of that epoch. In an hospital situated near that celebrated school, the young students were initiated into the practices of the art, and received clinical lessons; their pupils obtained the greatest success, so much so that on leaving this school they were deemed qualified to fill the place of professors in medical and other institutions.

# § XV.

### ISAAC BEN EMRAN.

But the successors of Moawia were not animated with the same zeal for the science. The thirst for military glory absorbed all

<sup>\*</sup> Abouefaradj, Hist. dyn, p. 158, and 198.

<sup>†</sup> See Rhazes, l. v. l. vii., and l. viii.

<sup>‡</sup> Assemani, Biblioth. Orient, Clement Vatican, vol. vi. p. 940, and 942.

their thoughts. But an age had scarcely elapsed before the sceptre passed from their hands into that of the Abassides. Abou Giaffir Almanzor, the second Caliph of his dynasty, was attacked with a dangerous disease; he sent for a physician of the Nestorian school. Being restored to health by the skill of this physician, he learned the value of the healing art, and became the patron of the sciences. Almanzor enriched the new city of Bagdad with a great number of works on medicine, astronomy and philosophy, which he had caused to be translated from the Greek; viz: those which had escaped the researches of the schools of Maser Djawah and the Nestorians.

He had the works of Aristotle, Galen and Ptolemy translated; and these labors continued under his successors, powerfully contributed to give to the young Jews the desire for instruction.

The school of Bagdad soon became celebrated. From it arose Isaac ben Emran, a celebrated physician and philosopher. Born at Damascus, he came at an early period to Bagdad to study medicine, and there made such progress, that Zaid, an African emir of Kairouan, the chief city of the Arabs in Barbary, gave him his full confidence and appointed him his physician. Zaid having fallen sick, a Christian physician condemned so obstinately all that had been directed by the Jewish physician, that he could not but perceive that the sole object of the Christian was to deprive him of the good will of the Emir.

Isaac could not submit to such treatment. He declined attending upon the case of Zaid not so much from anger as on account of attachment for him. When the emir demanded the reason of his conduct, he replied in these remarkable words: "The disagreement of two physicians is more deadly than a Tertian fever." This was apparently the disease with which Zaid was attacked. Isaac ben Emran died in the year 183 of the hegira, (799 of the common era). He wrote upon the cure of the symptoms caused by poisons and upon some other subjects.\* Ebn Beïtar, physician of Almelic Alcamet, sovereign of Egypt, frequently quotes him in his works.

<sup>\*</sup> Eloy, Diction. hist. de medicine, vide Isaac ben Emram.

# § XVI.

### JOSHUA BEN NUN.

The Arabs still remember with admiration Haroun al Raschid. He enriched the city of Bagdad with a great number of works on astronomy and mathematics, which he caused to be translated from the Greek into Syriac and Arabic. He filled his court with poets and learned men, whom he had invited there from all parts of the world. He was a cotemporary of Charlemagne, who sent to him that celebrated embassy in 805, the chief of which was an Israelite of France. He so much favored physicians, that he founded the city of *Tauris* as a memorial of the cure performed on his wife.

He patronised the school of Djondesabour and established one at Bagdad where he selected to teach the sciences, the most celebrated among the Jewish and Christian physicians. He assigned them a good salary and decreed that those who wished to devote themselves to the practice of medicine should be examined by these professors, as was the custom in the Nestorian schools. Among the Jewish professors of this celebrated school was one particularly distinguished, Joshua ben Nun, surnamed Rabbi of Seleucia\* The particulars of his life are little known; except that at the beginning of the ninth century he enjoyed great celebrity at Bagdad both as a good practitioner and an excellent theorist. His school was frequented by the greatest physicians of his time, and among his disciples were Yahia ben Masoviah, commonly called John Masuée, and the celebrated Abou Joseph Jacob ben Isaac Kendi. This last physician was himself, according to d'Herbelot,† an Israelite by birth and condition; but this opinion is not received by authors generally.

However that may be, Joshua neglected no means of extending every where around him the knowledge of the healing art.

<sup>\*</sup> Asseman, Biblioth. Orient. vol. ii. p. 435.

<sup>†</sup> Biblioth. Orient. vide Jacob ben Isaac Alkendi.

<sup>‡</sup> Russel. The Nat. Hist. of Aleppo, 2d ed. appendix, p. ix.

He united most nobly in the translations which were the first steps of the Arabs towards the cultivation of the sciences of which Maser Djawah, had furnished the first example. The appearance of these translations could not fail to excite the liveliest sensations in the learned world. Joshua acquired from this source the most extensive renown, and he received from all parts the most merited congratulations and sincere proofs of the esteem in which he was held.

# § XVII.

#### MESCHALAH.

The reign of Mahmoud is the culminating point of an epoch ever celebrated in the annals of the human mind. The learned men driven from Constantinople by the religious wars and the troubles of the empire, sought refuge in great numbers around his throne, and at that period the works of Aristotle and a part of those of Plato were translated. Camels loaded with books in all languages continually arrived at Bagdad, and the Emperor Michel III., conquered in battle, had imposed upon him as one of the articles of the treaty of peace, the obligation to send Greek works. Every where throughout the empire schools and academies sprung up. Basora, Samarcand, Ispahan, no longer resounded only with the songs of the poets and the melodious sounds of musical instruments.

Very soon this intellectual culture extended beyond Asia, the city of Alexandria soon revived the glorious days of the Ptolomies. Fez and Morocco, Sicily and Provence, were then devoted to letters. But in Spain particularly, the oriental sciences were extensively diffused. Cordova, Seville, Toledo, Saragossa, Greneda, nobly vied with each other in their love for the sciences. It is estimated that more than seventy public libraries existed in different cities, and the number of works was so great that the catalogue alone would form a library itself.

In the midst of this intellectual movement the Hebrews were not content with simply having translations or copies of the Arabic writers, but there were among them men who aided the onward march of all the sciences, particularly of medicine. Such among others was Meschallah.

Meschallah or Meshalla was at the same time a great astronomer, great astrologer, and great physician. He obtained the highest reputation at the court of Mahmoud, for his learning and skill in the healing art, as well as for the dexterity with which he practised astronomy and astrology.

Many of his works remain, a list of which is published in Casiri.\* We note here as among the most celebrated, two treatises, one on the Astrolabe, and the other on the Armillary Sphere; the treatises on the genethliac themes; the treatises on the rains and winds, the conjunction of the planets, of the different sects of nations, &c.

I have in my library a Hebraic translation of his Astronomical Problems, (Sefer. Haschellet le Meschallah,) and another of his treatises on the Eclipses of the Sun and Moon, (Bekadrot ha Schemesach va Israeli,) both made by the celebrated Aben Esra.

Meschalla enjoyed the highest reputation in Europe during the fourteenth century, a period when astrology was generally cultivated. At that time many of his works were translated into Latin, four of them were published at Nuremburg in 1549, and a fifth on the signs and indexes of the planets, is found in manuscript in the library of De Rossi at Parma.†

# § XVIII.

#### SEDEKIAS.

Up to this period these luminaries of knowledge had been exclusively confined to the Jews of Asia and Africa. The time had arrived when those of Europe became partakers of the same sciences. The Saracens, assembled from all parts of their vast region upon the frontiers of France, appear to have been brought

there only to diffuse a taste for learning among an ignorant people. In fact it is only since the invasion of the Arabs that we have seen the sciences cultivated successfully, by the Israelites of this country. These were Meschulam ben Kalonymos,\* Joseph ben Gorion,† Moses ben Iehuda,‡ Todros of Narbonne,§ Joseph ben Levi,|| and Sedekias who led the way in introducing this celebrated epoch.

The last was the physician of Louis the Meek, and Charles the Bald his successor. He was high in favor with those princes, and died in the year 880, honored by all who knew him.

Sedekias was so skilful in the practice of the healing art that he was considered in those times of ignorance as a real magician, and they did not hesitate to relate of him the most ridiculous and improbable stories. Among other things the veracious chroniclers tell us, that one day he devoured in the presence of the court, a wagon load of hay with its horses and driver.

This was doubtless a wonderful feat of anthropophagy, worthy to be transmitted to posterity, but another story that these judicious historians have handed down to us, is less worthy of being preserved, viz. that Charles the Bald was poisoned by this same physician. What in fact could he gain by committing so horrible a crime, or rather what would he not lose by it. "No one," says Voltaire in his Essaí sur les mæurs et l'esprit des nations, no one has ever assigned any reason why this physician should commit this crime. What could he gain by poisoning his master? Was there any one with whom he could find a more prosperous fortune? No other has spoken of the punishment of this physician, we must therefore refuse to credit the charge of poisoning, and make but one reflection, that Christian Europe was so ignorant that its kings were obliged to depend for their medical attendants on Jews and Arabs."

It is proper in this place to refute an assertion of d'Egasse of Boulay and Friend, who say that Charlemagne had at his day a Jewish Physician named Buhalyha Bengesla, or rather Iahyah ben Djesla, and that it was by the order of this monarch that he com-

<sup>\*</sup> See our Literarische und historische Analarkten, sec. v. p. 20. † Ibid sec. i, p. 7. ‡ Ibid sec. v, p. 20. § Ibid sec. v, p. 20. || Ibid sec. i, p. 7.

posed a book in Arabic upon the diseases of the human body. The truth is, that Buhalyha Bengesla, or rather Iahyah ben Djesla, was a Christian physician of the eleventh century. He embraced Mahometism in order that he might learn the science of dialectics or logic, under Abou Ali ben Walid. Ben Djesla among other works wrote a kind of Medical Encyclopædia, arranged in tables under the title, Takvim-al-Abdán.

Farreguth, a Jewish physician of whom we shall speak after a while, having translated this work into Latin, and dedicated it to Charles of Anjou, king of Sicily, has confounded this prince with Charlemagne, and made Ben Djesla his physician.

# § XIX.

### ISAAC BEN AMRAM, AND ISAAC BEN SOLEIMAN.

But still the great source of light was always in the East. It is there that the Jewish schools were multiplied, schools which in rivalling the Christian schools carried science so far that they excited the jealousy of the Arabians. In the 239th year of the Hejira, (853 of the common era,) the Caliph Montawakkel, passed a decree that the Jewish and Christian students should be taught in the Hebraic and Syriac languages, and he forbade them to make use of the Arabic.\*

From these schools arose Isaac ben Amram, and Isaac ben Soleiman, the most learned physicians of their time. The first practised his art at Kairowan, where he died towards the end of the ninth century. He was equally celebrated for his remarkable cures, and his writings, which were quoted with great respect by the Arabic writers.

A skilful physician of great talent and very learned, he also became celebrated by the great number of his students, among whom will stand in the very first rank Isaac ben Soleiman. Isaac ben Soleiman, surnamed Abou Jacob, but better known under that of D'Israeli, was born in Egypt, in the year 832 of the com-

<sup>\*</sup> Ebn Djouzi. Arabic MSS. in the Royal Library of Paris, No. 640, p. 40.

mon era. He first devoted his attention to the practice of the profession of an oculist. Finally, he came to establish himself at Kairowan, and attaching himself to Isaac ben Amram, became his pupil.

In a short time he became celebrated by his genius and knowledge, and was appointed physician to Abou Mahomed, Abd-Alla Mahdi, king of Africa. He wrote after that period many works, and acquired by his writings never-dying fame. He is also distinguished for the nobleness of his sentiments, and the greatness of his disinterestedness.\*

Israeli died 932, (of the Hegira 320,) upwards of one hundred years of age, without leaving any children, for he was never married. Some one asked him one day if he would not be much gratified to leave after him some one to perpetuate his name? "By no means" said he, "I leave behind me my *Treatise on Fevers*." Others say his reply was couched in these words, "I leave to the world four works which will preserve my memory better than could be done by children, the Treatise on Fevers, that on Food and Remedies, that on Urine, and lastly the Treatise on the Elements."

We give here a complete list of his works written in Arabic, and translated into Hebrew and Latin.

- 1. Treatise on Fevers, in five books, a work very superior to any which had been written before his time on this subject.
- 2. Treatise on Simple Medicines and Aliments, a work very celebrated among the Arabic physicians, who quote it continually.
- 3. Treatise on Aliments and Remedies, a work known in Hebrew, under the title of Sefer ha Mesaadrim.
- 4. Treatise on the Elements; this is a physical work on the four elements divided into three parts, and translated into Hebrew by the celebrated Abraham ben Chasdai.
- 5. Treatise on Urine, a great work, divided into ten books, translated into Hebrew by a certain Contasti, as is evident from the copy preserved in the royal library at Paris, ancien fonds, No. 408.
- 6. An Abridgment of the Treatise on Urine; this is extracted from the work of which we have just spoken.

<sup>\*</sup> Liter, et Hist. Analekten, sec. xix.

- 7. Treatise on Definitions and Prescriptions, a philosophical work too little known.
- 8. Introduction to Medicine. I do not know if this is the anonymous work in Hebrew manuscript in the royal library of Paris, ancien fonds, No. 384, which bears the same title.
  - 9. Treatise on the Pulse, a work quoted by Ibn Abi Osaiba.
  - 10. Treatise on Theriaca, quoted by the same historian.
  - 11. Treatise on Philosophy, a work divided into twelve parts.
  - 12. The Garden of Philosophy, a work which contains various questions of Jewish Theology.
    - 13. Introduction to Logic, likewise quoted by Ibn Abi Osaiba.
- 14. Commentary on the Book Iésirah, mentioned in the apologetical letter of Pennini.
- 15. Treatise on Melancholy, MSS. in Hebrew, in the royal library of Paris.
  - 16. Treatise on Dropsy, likewise in MSS. in the royal library.
- 17. A kind of practical course upon almost all diseases, divided into several books, in which is but little theory, but numerous remedies according to the practice of the Arabians. This work which has been translated into Hebrew, under the title of Jair Natib, is found in MSS. in the Library of De Rossi at Parma.\* This is nothing else than the Viaticum of Constantine, upon which Gerard de Solo has written a commentary. It is so called from the time of this commentator, because Constantine, a Benedictine monk of Mount Cassino, translated it from Arabic into Latin, and it was attributed to him.

<sup>\*</sup> MSS. Codices Hebraici, Biblioth. I B de Rossi, Cod. 1168.

# BIBLIOGRAPHICAL NOTICES.

MEDICAL SCIENCE AND THE MEDICAL PROFESSION IN EUROPE AND THE UNITED STATES. An Introductory Lecture, by Harvey, Lindsly, M. D. Professor of Obstetric Medicine in the Columbian College, pp. 35. November, 1840. Washington: Peter Force, Tenth street.

THE author of the present lecture has presented a rapid outline of the state of medicine in those countries, where it has attained the greatest progress. England, France, Germany, Italy, and the United States. He lays down a principle, that the condition of medical science in these countries is intimately connected with the peculiar intellectual and moral organization of their inhabitants.

Englishmen being of a philosophical character, looking to useful results, direct their whole attention to the collection of facts. They are rather desirous of applying successfully old remedies than discovering new. They take nothing for granted; every thing is submitted to rigid examination, hence their practice has become more simple, and it is believed more prompt and efficient than on the continent, although it is admitted by the author in justice to what is considered the neutral and timid practice of the continent, that from a difference of climate, and the habits of the people, active treatment is not so necessary as in England. He states it as a fact, that smaller doses of medicine are more effectual on the continent than in England, and that an Englishman in Germany requires less medicine than when at home, and vice versa with the continental inhabitants when in England, a remark particularly applicable to purgatives and opium. That the diseases of our country are of an analogous character to those of England, which is attributed justly we think to the abundant animal food of the American people. But the author asserts, that with all due allowance for difference of climate, that diseases are less skilfully treated on the continent than in England or this country.

He reprobates, and we agree with him, that division of the profession in England into Physicians proper, surgeons and general practitioners. He considers it wrong to carry the division into professional education. We believe that it is considered a great evil in England, and that one of the objects of medical reform is the breaking up this unnatural division. In this country it is not practicable. Our physicians must practice all branches, and be equally ready to prepare a dose of medicine, to amputate a limb, or to deliver a child.

He considers the English defective in their medical investigations on the subject of pathological anatomy, and behind their continental brethren in that respect, but superior in the "more skilful application of remedial measure, and a more energetic and decisive practice; a more watchful care of the patient, and a more accurate and searching scrutiny into the effects of remedies."

France.—The organization of the profession in France is given, just compliment paid the efforts of French medical men, particularly in pharmaceutic chemistry, the discoveries of quinine, iodine, and other remedies. In Diagnosis they excel, and he pays to Louis a well deserved compliment for the invention of the numerical method. Modern surgery is also much indebted to France, in having invented and improved the modes of operating, and presented new instruments, or improved the old. But that the glory of French medicine is pathological anatomy. On the other hand the author exhibits the deficiency of French medicine. "The Frenchman seems to forget his patient while studying his malady, and is hence more anxious to understand the one than to relieve the other. In his solicitude to form a correct diagnosis, and then to be able to demonstrate its correctness, it seems as if he would be almost willing to let his patient die, that he may have it in his power to show, by a post mortem examination, that he understood the case; or, in other words, that his devotion to the pursuit of pathological anatomy is so intense and so absorbing that the practitioner forgets that this is only valuable as it affords means of subduing disease, and is almost induced to regard it as the grand object to be aimed at in all his inquiries." We have heard such charges before, but have always hoped that they were exaggerated. Another fault of French practice which is stated, is the want of the power of generalization.

Germany—Has done much during the last thirty years, principally in anatomy, human and comparative, and physiology. Practical works but few. Auscultation, percussion, and lithotrity, are but little known and seldom practised. Lithotrity it is said has never been performed except in Berlin. The German surgeons excel as oculists, and in the cure of deformities. The principal defects of German practice is adherence to old and useless formulæ, to fanciful theories, and neglect of the improvements of other countries; but that those are gradually disappearing as they are aided by the efficient patronage of the government in forming libraries, establishing museums, and endowing hospitals. Our author says but little in favor of Italy. Passing by the labors of Bellingeri, Rasori and others, he compliments their excellence in making wax preparations.

Russia, Spain, Portugal, Sweden and Denmark, he describes in one paragraph, as having "done little or nothing to elevate or advance the medical profession." He comes last to notice our country. He fears that we cannot claim much merit of invention, or original inquiry, but have rested satisfied with borrowing from European sources, "rather than resorting to the fountain-head of science and of truth, and there drawing for ourselves of its pure and abundant waters." He offers as a just explanation of our deficiencies in those respects, our want of large and extensive hospitals filled with those patients from a degraded and vicious populace, of the wealthy and ancient universities, and extensive apparatus and splendid museums, of the division of labor justified in a dense population. But still he states that the claims of the medical profession in this country are large on the gratitude of the people.

"They have done as much, perhaps more than could reasonably have been expected of them, considering the disadvantages under which they have labored. The genius of our people, like that of our institutions, is essentially utilitarian, looking to useful, substantial, durable results, rather than to splendid display or brilliant exhibition. Hence the attention of American physicians has been devoted chiefly to close, scrutinizing, accurate, observation of disease, and the obscure and complicated effects of remedies in controlling and relieving it, rather than to researches in pathology, physiology, or pharmacy, where our opportunities for discovery, compared with those of European physicians, have been limited and scanty, and where the beneficial results, even when successful, are not so immediate or obvious."

He also claims for this country having written able works on various branches of medicine, of having established in 1797, the first medical periodical in the world. In surgery he justly claims much for this country for having made many surgical improvements; successfully "performing dangerous, ingenious, and novel operations, which never had been attempted by physicians of the old world." He refers to the operations of Mott, Physick, Warren, Mussey, Dudley, Barton, and he might have extended much farther this array of bright names. But this agreeable duty of illustrating and defending American surgery will be fully performed at no distant day; when facts will convince a candid world how much surgery is indebted to its American disciples. In concluding his well written lecture, the author notices a subject of great interest to the profession, viz. that it has not received the fostering aid of government, which has been so instrumental in establishing the great medical universities of Europe. That all is left here to individual effort, while hundreds of thousands of dollars are expended in European governments on the splendid institutions of Berlin, Paris, Vienna, and London. But that in this country large sums have been expended on theological and literary academies, (which the author does not condemn,) but that very little has been voted towards medical institutions. Now we agree most heartily with the author, that this is not right, that it is the duty of a paternal and just government to foster and encourage every effort to improve the health of the people and relieve disease, and that parsimony here is most unwise and ill-judged. Millions are expended in a canal which is often a source of disease, while thousands are refused or reluctantly voted to the founding of colleges, to teach medicine, or hospitals to illustrate what is taught. We may hope with the author that this state of things will soon be reformed altogether, and that hereafter liberal appropriations will be made to the establishment of institutions for the cultivation and diffusion of medical knowledge. From the full analysis we have given of the lecture, the reader will form a judgment of its real value and agree with us, in considering it a sensible lecture, full of useful information, and remarkably free from the usual declamation in such efforts.

Annual Lecture, Introductory to the Winter Course of Anatomy, in the *Philadelphia School of Anatomy*, delivered on Monday Evening, November 2d, 1840, by James M'Clintock, M. D., Lecturer on Anatomy and Surgery, one of the Physicians to the Philadelphia Hospital, &c. Published by the Class, pp. 16.

DR. M'CLINTOCK is one of the private lecturers of Philadelphia. He introduces his subject in a very appropriate and manly style, claiming the respect and attention of his auditors, not on the ground of professional dignity, or college honors, or chartered privileges, but upon the noble and broad principle sanctioned in this country, of free and fair competition, by which each and every man is insured the opportunity to become the architect of his own fortunes. We admire this generous self-reliance, and this appeal to a cord, that never fails to respond in the heart of every noble and generous mind. A fair field and no favor is all that a spirit destined for eminence demands, and that it will have; for talent, like truth, is great, and will ultimately prevail.

The author, after this suitable introduction, proceeds upon a well beaten path of inquiry, the importance of a thorough study of anatomy, as the basis of the whole structure of medicine. This is a common topic in introductory lectures, but still its importance well justifies its continual repetition. It cannot be too much insisted on. He dilates upon the value of anatomy, in reference to physiology, surgery, pathology, the practice of medicine and obstetrics.

In regard to surgery, he styles anatomy the theory of which it is the practice. His remarks upon the great value of a knowledge of anatomy to the surgeon, are striking and just; this he illustrates well, by a reference to the former condition of surgery as contrasted with its present proud eminence.

In reference to medical practice we quote a portion, which is a just reply to those wise acres, who to extenuate their own indolence, deny the value of anatomy as an aid to practice.

"It remains now, gentlemen, to state briefly the importance of this science to medical practice. What has been said in regard to pathology, has very close reference to this branch of the subject, for there is nothing more certain than that therapeutics, which investigates the operation of remedies as employed either to obviate or to remove disease, must depend very much, if not entirely, upon the theories of pathology that we adopt; for according to our notions of the nature and causes of disease, must be our opinions in regard to the means necessary for its removal, and their mode of application. But it is important that I should point out to you the absolute necessity of clear and correct anatomical knowledge, in order to the formation of a true diagnosis, in actual practice. To ascertain the existence of disease in any organ, its situation and relations must be well understood, or otherwise when symptoms occur, indicative of derangement in a region where several organs are placed, they might readily be referred to a viscus having no connection with the phenomena thus developed. For example, in examining a patient who complains of pain in the right hypocondriac region, the situation, relations and functions of all the different viscera there placed, must be accurately known, for the pain may be occasioned by a morbid state of either of them. The importance of such information will be appreciated, when you remember that in this region are found, the liver, gall-bladder, biliary ducts, pylorus, part of the duodenum, colon and pancreas, disease of any one of which might give rise to the symptoms alluded to. I cannot, therefore, urge upon you too strongly, the necessity of giving your attention to the study of anatomy proper, now, while the means of obtaining this essential knowledge are placed within your reach."

He also insists on the great importance of losing no opportunity of making post-mortem examinations.

But there is one view of the value of anatomical knowledge so important, that we cannot forbear giving another extract from our author, premising the startling assertion, that we fear that the lives of innocent persons accused of horrible crimes have been sacrificed to the ignorance of the medical witness, and that miserable self-esteem that would rather jeopardize the life of a fellow-creature than confess a doubt, lest his ignorance, of which he is conscious, should be unveiled to all in open court, and the blunders and errors of years should be thus exposed.

"The want of anatomical knowledge is seldom more keenly felt by the practising physician, than when, either for judicial purposes, or to satisfy a natural and laudable curiosity in remarkable cases of disease, he is called upon to make a post-mortem examination. Why is it that so many of these reported examinations are vague, cloudy and unsatisfactory, but that the operators were ignorant of morbid anatomy? How often are we called upon to blush for our profession when such reports are published to the world, so entirely destitute of so much as the form of scientific investigation, that even the laity laugh to scorn the imbecile ignorance and stupidity which they exhibit! This I do assure you, gentlemen, is no surcharged picture, for if you have ever witnessed, in a court of justice, the examination of physicians in a case where accident or violence has caused mutilation or death, you have had direct evidence of the utility of correct anatomical information. The practitioner who has, during his pupilage, availed himself of the opportunities afforded him, and carefully and perseveringly devoted his time and talents to the acquisition of anatomical knowledge, answers at once, correctly and without hesitation or doubt, the questions propounded to him; while on the other hand, the man who has neglected the opportunities and wasted the time which he ought to have devoted to this subject, answers evasively, ignorantly and doubtfully, thus manifesting his own deficiencies, incurring the ridicule and contempt of the by-standers, and disgracing the honorable profession which he pretends to practice. May your zeal and industry prevent you from ever having your names enrolled upon this catalogue of dunces, this list of despicable hangers on to the skirts of our noble calling."

With this extract we must close our notice of this lecture, which may be justly characterized as remarkable, not for novelty, but for forcible and expressive language, showing mind and independence of character in its author.

INTRODUCTORY LECTURE ON ANATOMY, by THOMAS MILLER, M. D., Professor of Anatomy and Physiology, Columbian College, D. C.

PROFESSOR MILLER, in his introductory remarks, takes a view of the structure of organized beings, from the animalcule, "a world within itself," up to the lord of the creation, formed in the image of his Maker. He alludes to the remarkable developments made by the solar microscope, in disclosing the intimate structure of animals, vegetables and substances around us, and glances at a theory that excites not the most agreeable feelings, that "man is composed of minor animals, according to the opinions of some, he is a mere congeries of animalculæ, his form and structure depending on their peculiar arrangements, his diseases on their change of characters and properties, and even the operations of his intellectual functions on their action." He thinks it not judicious to disregard entirely the animalcular theory of the origin of disease, which is rendered probable by the numerous experiments which have been made in different countries. But still he aims at teaching anatomy as the proper basis for physiology, the practice of medicine and surgery. He very properly lays down the position, that a knowledge of anatomy is indispensable to a profitable study of the functions of the body. As regards the value of anatomy to practice, we quote the following:

"In what manner, I may be asked, does anatomy prove so beneficial to the practice of physic? Unless the physician knows exactly the situation and the connection of the several organs, the course and termination of the several vessels, their disorders, and how far these disorders may affect the body considered as a hydraulic engine, its nerves, the particular degree of its sensibility, the sympathy of one part with another, or of each with the whole, the powers of motion, the importance of each organ to the general welfare, the manner and cause of its action, it will be impossible for him to understand the seat of internal disease, or lay down general indications for removing it, or even to adapt the general effect of a remedy to the nature of the diseased part. Let us look back and observe the state of the medical profession before it was properly studied-let us reflect on the period when patients laboring under the small-pox were surrounded with red curtains, and hot and stimulating draughts were given them to throw off the disease, when the most popular and only remedial agents were amulets and charms, and the most absurd doctrines of disease were entertained by those who undertook its cure. Let us trace the progress of the science, as its advances were influenced by anatomical investigations; let us compare the state of medicine as it was when in the hands of designing monks and empyrics, with what it is at the present enlightened age, it then being a confused and uncertain art, based on no fixed data, while it is now a consistent and certain science, founded on the true laws of physiology and pathology. Correct medical principles cannot exist unless based on these; for the one teaches us what is health, and the other leads us to a knowledge of the structural diseases of organs; springing as they do from anatomy, their benefits are at once imparted to the practice of medicine, and without them we can never arrive at correct conclusions of the difference between health and disease, and of the influence of disease on the animal structure. Need I call your attention to the importance of pathology? Need I assure you, that the greatest innovations and improvements in the science have occurred since this method of testing medical opinions and experience, and founding medical practice, has been

instituted? Are not the improvements of diagnosis of diseases of the chest sufficient of themselves to convince you of the advantage of pathology? Do we not see that it has already paved the way for a diminished mortality from that most certainly fatal of all diseases, pulmonary consumption; that, through its medium, diseases once considered necessarily fatal are being combatted more successfully every day, and this we owe to anatomy; it is the direct source of all the improvements in the science."

We were particularly pleased with that part of the lecture, in which he insists on the general study of the structure of the body. He combats the objections against the practice of dissection, with great power, rising to eloquence. We must conclude our notice of this able lecture with this extract, forbearing to say more, which the merits of the lecture would well justify, but from personal intimacy with the talented author, might not be considered without bias.

"It being well ascertained that there is no substitute for the dissection of the human body, what objection should exist to this mode of studying anatomy? Why is the human body so highly estimated, that it is preferable to place it six feet under ground, to allowing it to contribute to the benefits of science, and through this to the welfare of the living. Let us reflect on the utility of this profound interment, this six feet of earth, of iron coffin and leaden shroud? What avails all this? The moment life departs, every breath that blows wafts myriads of insects to the feast; unseen by the watching friends, they deposite their eggs in the corpse, and with it are committed to the earth, to remain dormant only till the vivifying influences of the heat evolved by the process of putrefaction calls them into action; and when they have fed to fatness on the rankling corpse, and when ready to assume their perfect form, they make their way to the surface, and wing their flight to repeat a similar process on other dead. Tell us not, then, of the repose of the tomb! When we so carefully deposite bodies in the earth, they are not only dissolved by the chemical affinities of their own elements, but serve as food for myriads of insects; and, sooner or later, are carried forth on the four wings of heaven. All the efforts which art can divine only tend to protract this decay of the animal structure; marble columns and monuments serve only to show where were laid the mortal remains of a friend; and in time, from the immutable and uninterrupted operations of the laws which regulate matter, these also change, perish, and are no more. Notwithstanding these facts, there are those who are so restricted in their mode of thinking as to feel and express, towards the cultivators of our noble science, prejudices unworthy of the most unenlightened period of the world: there are those who are well informed on almost every other subject, who yet appear to shun information on this. To use the metaphor of an eloquent writer, they are like children, who lie shuddering all night at the shadow on the wall, fearing to approach it closely and dispel their idle terrors. They are in the habit of associating anatomy with curiosity and cruelty; they regard the man who strews the plains with thousands of his fellow mortals, purely for the gratification of his ambition, as a hero worthy or aurels and applause; while they view the devoted student of our science almost with disgust, and are ever ready to join in the clamor against him, as a violator of the repose of the tomb, a disturber of the dead. And this occurs in a christian land, where devout and faithful ministers of the gospel are daily engaged in proclaiming that the soul is immortal, and the body corruptible and evanescent."

# FOREIGN INTELLIGENCE.

#### ANATOMY AND PHYSIOLOGY.

Menstruation in a Child. By Dr. Lens, of Danzig.

A HEALTHY woman, the mother of several hearty children, was delivered two years ago of a well-formed girl, which she, as usual, suckled herself. In the course of the year the child was weaned, and in the second year continued growing; but its parents were not a little surprised, when, in its eighteenth month, a flow of blood from the genitals took place, continued for some days, and then ceased. When I saw the child it was two years old and perfectly healthy, although the discharge of blood had, since the time mentioned, recurred regularly at every new moon. The breasts and genital organs were just like those of other children of the same age and sex; but the parents stated that the latter were hotter than usual, and somewhat swollen, before and during the discharge of blood, and that at the same time the child was always ill, with disturbance of the vascular system and heat about the head, great thirst, redness of the face, loss of appetite, and so on; and that when the discharge ceased, the child was always immediately after restored to its good health. The flow of blood always continued for three or four days, and, according to the parents' account, amounted to two, or, at the most, three ounces each time. As the discharge did not appear to interfere permanently or seriously with the child's health, the author did not attempt to control it.

Casper's Wochenschrift.

Extraordinary Enlargement of the Kidneys in the Fætus, from the Development of Hydatids in their Substance. By Dr. F. OESTERLEN, of Murrhardt, in Wurtemberg.

DR. OESTERLEN was called in January last to a patient in labor, whose delivery was retarded by the extraordinary size of the child's abdomen, but before his arrival the fœtus was expelled by the natural efforts.

The child, a female, was still-born; it appeared to have reached the full period: its weight was nine pounds, that of the placenta, which appeared healthy, two pounds. On opening the enormously large abdomen scarcely any thing was to be seen but two large bodies, which were situated one at each side of the cavity, and had forced the liver up close under the diaphragm, so that only a small part of it was visible. The two bodies were ascertained to be the kidneys; they resembled each other exactly in size, structure, color, and form; their shape was natural, and they were both divided into lobules, as is usual in the fœtus; they each weighed nine ounces, were about five inches and a half long, and four inches broad at their broadest part; they were smooth on their surface, of a red color, in parts verging towards violet, and studded every where with little granules of a dark blue or gray color. These little bodies were hydatids, which, on dividing each kidney. were seen to occupy the whole of its substance. The smallest hydatids presented a diameter of less than a quarter of a line, the largest of about two lines, but the average diameter was about a line. The smallest were near the surface, and they became larger towards the centre of the organ. Their form was spherical, and they were perfectly transparent.

The pelvis of each kidney was small, and contained a little clear watery fluid. The only remains of the true parenchyma of the organ consisted of a firm, fibrous, reddish tissue, which was by no means abundant. The kidneys were well supplied with blood. The bladder contained only a few drops of a perfectly limpid fluid. All the other organs in the body were natural.

Neue Zeitschrift für Geburtskunde.

Bronchocele in a Fætus of about Eight Months. By Professor F. Mondini.

THE subject of this case was born in a prison in which its mother was confined for a theft. It was a male child and born dead; the placenta and membranes were unnaturally large, and the liquor amnii very abundant, and it was evident that it had been alive to within a very short time of its birth.

At the anterior part of the neck there was a large tumour, a bronchocele. It occupied chiefly the left side of the neck, and was of an oval tuberculous form, and was here and there spotted with bright red. Commencing above at the margin of the lower eyelid, and hideously pushing up the nose and the mouth, it extended laterally, and protruding the lips, descended of an enormous size down to the lower apex of the sternum, constantly tending more to the left than to the right. It was longer than it was broad, measuring in one direction three inches and eight lines, and in the other three inches and a half. From a more minute anatomical examination, it appeared that this tumor consisted of a peculiar alteration of the cellular tissue interposed between the blood-vessels that form the network, and covering the network itself; the network in the thyroid gland, which, as Soemmering says, may be compared with the so-called rete mirabile, which is found on the carotid and the ophthalmic arteries of ruminants. Novi Commentarii Acad. Scient. Instituti Bononiensis v. iii., and Annali Universali di Medicina.

History of a supposed Hermaphrodite. By Robert Merry, Surgeon, and its dissection by Sir Astley Cooper.

MARY BENNET, aged 86 years, died in 1840, of a gradual decay of her natural powers. She had resided in Herefordshire for the greater part of her life, obtaining her bread generally as a straw-plaiter, and occasionally going out as a charwoman. She was extremely muscular and powerful, capable of severe labor. As a girl, previous to puberty, nothing is positively known about her, but there was a rumor, that she was not formed like other girls. No menstrual secretion ever appeared during her life; she had nipples, but no protuberant breasts. Her voice was gruff and masculine, as was her general appearance. She was never married, disliked the society of men, and shunned that of women, and during the greater part of her life, inhabited a cottage by herself.

Mr. Merry, soon after death, removed the parts of generation, and gave them to Sir Astley Cooper. "The pudenda and mons veneris had their usual clothing, and upon separating the labia, the glands and corpus clitoridis appeared of a very unusual length, being elongated to two inches. The papillæ of the glans were particularly large and conspicuous, and must have possessed an extreme degree of sensibility. There was a slight depression in the glans where the urethra might have been supposed to exist, but there no opening existed. Much nearer to the pubes, on the lower part of the clitoris towards the perinæum, the urethra appeared open upon its under side, and some lacunæ were seen there, but under the arch of the pubes, a circular opening existed, which was the urethra, resembling the orifice of the meatus urinarius." The labia projected on each side of the clitoris, but they contained no testes, and the projection was found to consist of fat. A bougie passed readily from the urethra into the bladder. In the urethra, under the pubes, when its canal was opened, there appeared a longitudinal opening between the folds of membrane. This opening or slit led directly into the vagina; it was longer from before backwards, than from side to side, and its size would allow a common pen to enter it. The vagina had no os externum, but only this slit from the urethra. It terminated in a well formed os uteri. The uterus was of its usual form, and had a Fallopian tube attached to its fundus, and the ligaments of the ovaria to its side. On the right side, the ovarium remained and had its usual internal appearance, but it was not more than half its natural size.

"This woman, therefore, (concluded SIR ASTLEY,) differed from others in the magnitude and length of the clitoris, in the absence of the external orifice of the vagina, which began from the urethra itself, and in the imperfect development of the ovarium." And to this imperfect development, he ascribes the suppression of the menstrual secretion.—Guy's Hospital Reports.

Complete absence of Menstruation. By M. KRUGER-HANSEN.

A woman of about 58 years of age, of a robust constitution, and who had always enjoyed good health, much younger in appearance than she really was, and in

whom all the feminine characters were well developed, never in the whole course of her life had any discharge at all similar to the menses. She never had fluor albus, or any abnormal sanguineous discharges or sweats, to compensate for the want of the usual monthly secretion. It is added that the sexual appetite was present, but that she never had borne children.—Graefe's and Walter's Journal.

# Absence of the Uterus.

Dr. Seguin relates, in the Revue Médicale, (July, 1840,) an example of this malformation. The subject of it was a woman, aged 27 years, of excellent constitution, and enjoying perfect health. The mammæ were well developed, and the external parts of generation perfectly formed, but the vagina was a cul-de-sac, of about an inch and a half in extent, it was lined with a rose colored rugose membrane. Curious to discover whether there existed behind the membranous closure a uterus or rudiment of one, Dr. S. introduced a finger into the rectum and another into the imperfect vagina and ascertained that the two fingers came in almost perfect contact. No trace of an uterus could be detected.

This woman is married, has venereal desires, and every month experiences a species of molimen hamorrhagicum, though she has never had any hamorrhage to replace the menstrual discharge.—American Journal of the Medical Sciences.

# Arrest of Development of the Uterine Organs.

DR. O'BRYEN records, in a recent number of the Dublin Journal, (January, 1841,) an example of this, in which the uterus measured only one inch in length, one line and a half in thickness, and four lines in breadth, which latter was the same at the os tincæ and the fundus. The ovaries were each about the size of an almond, and, when divided, presented two or three cavities. The Fallopian tubes were well formed, but their openings into the uterus were much larger than usual; the os tincæ was about the size of a small pea, and very soft; the vagina was small, and had a very few rugæ.—Ibid.

# Menstruation during Gestation, and Amenorrhæa in the Intervals.

DR. MEURER has recorded an example of this in a woman ætat. 27, pregnant, when he wrote, for the fourth time. She always has had her menses regularly during pregnancy, and only during that time. They come on without any illness; and she has always borne healthy children at the full period. While unmarried, and except during pregnancy, she never menstruated, but she was never unwell from it. Her general appearance is rather masculine; it appears, therefore, that in her, as in all viragos, the sexual functions require a powerful excitant, such as pregnancy, to cause them to be energetically performed. The menstruation appearing in such a person during pregnancy may be regarded as a wise effort of nature to relieve the local fulness of the sexual organs, which might prove injurious.—London Medical Gazette, from Medical Correspondenzblatt.

# PATHOLOGY, PRACTICE AND THERAPEUTICS.

On Nervous or Spasmodic Asthma. By Robert J. Graves, M.D., of Dublin.

[The following is only a part of the very interesting section on Asthma, in the article "On the Treatment of various Diseases," in the last number of the Dublin Journal, by this eminent physician.]

It is evident, that to account for the spasmodic symptoms of asthma, we need not have recourse, with Doctor Clutterbuck, to the diaphragm or intercostal muscles, but to the muscles of the trachea and bronchial tubes themselves; on the whole, therefore, we may conclude, that those who have returned to the opinions professed by our predecessors, are not so much mistaken as their opponents pretend. Even when the paroxysm is intense in degree and duration, where the patient is obliged to sit up half the night; where any attempt to lie down produces symptoms of asphyxia; where hours are spent in extreme distress with lividity of face and lips, gasping, loud wheezing, and great fulness of the vessels of the head and neck; even under all these circumstances, the attack may be nothing but a fit of pure spasmodic asthma. A person thus affected may spend a whole night in the way I have described, and yet, towards morning, he may sleep a few hours, and awake refreshed and comparatively free from dyspnæa, and in the course of the day may be able to go up stairs quickly, run, ride, even hunt without difficulty. I have in my recollection, the cases of several young men subject to severe paroxysms of asthma for five or six nights in succession, and who, immediately after the paroxysm disappeared, could use any active exercise as well as the most vigorous and healthy of their companions.

These facts establish the existence of a disease deserving the name of spasmodic asthma, and show that very violent paroxysms of difficult breathing may occur in persons free from organic affection of the heart or lung. When, however, any permanent change in the structure of the respiratory or circulating apparatus exists, then such changes become the exciting causes of paroxysms of dyspnœa, often closely resembling true spasmodic asthma, but readily distinguishable from it, if due attention be paid to the history of the patient's sufferings and his state between the fits. I have now met with so many cases of young persons in whom no trace of any organic complication existed, that it seems to me more than probable, that spasmodic asthma is not so rare a disease as is imagined. In a little boy, some particulars of whose case I formerly published, the attacks were frequent, violent, and to all appearance, purely spasmodic; he got a very severe paroxysm of gout (hereditary from both his father and mother) in his foot, and has never since had asthma, though four years have now elapsed, and he has been subject to all the excitement and violent exercises of a public school. Mr. Fleming, now of the Isle of Man, and Sir Philip Crampton, attended with me a young gentleman, aged about twelve, who was subject to violent dyspnæa, increased by even the most gentle exercise; indeed for many months he could not walk even quietly in his room, without incurring the risk of

suffocation for want of breath, attended with palpitation, wheezing, and all the symptoms of approaching asphyxia; every remedy we could devise was tried most perseveringly for a year, without the slightest benefit, when he got typhus fever, from which he narrowly escaped, but since his recovery, he has never had even the least vestige of his former complaint. These two cases exemplify, in a remarkable manner, the influence which the general state of the constitution often exerts on local affections.

Asthma, like all other nervous diseases, is subject to the most unaccountable variations, and is most uncertain as to the effects which our remedies, or the influence of physical agencies, produce. The following is an example. In December, 1839, I attended two gentlemen residing in the same street, and each about forty-five years old; neither was liable to any other disease, and they were both short and stout; on a very cold morning I found one of them very ill indeed; he had not slept at all during the night, and had every moment been on the point of smothering from asthmatic dyspnæa. The extreme violence of the paroxysm he attributed to the fact, that his bed-room chimney had smoked occasionally during the night, and the weather was so cold, that he was afraid to open the window to let out the smoke. I ordered him to change his room, and I then proceeded to visit his neighbor, and found him sitting in a room full of smoke; he apologized to me for introducing me into so disagreeable an atmosphere, and explained, that when the fit of asthma became very bad, the only sure means of obtaining relief, which he knew of, was to get a good coal fire lighted in the grate, which being done, he made his servant occasionally obstruct the progress of the smoke up the chimney, and thus maintain a certain density of smoke in the room; this never failed, he assured me, to bring relief. This gentleman was of very active habits, was agent to several large properties, and consequently obliged to travel much about the country; experience had proved to him, that he could derive no benefit from turf smoke, and therefore he never stopped at any inn where they had no other fuel but turf, as he felt himself insecure unless he could procure coal smoke in case of an asthmatic attack. Such idiosyncrasies will ever baffle the researches of the mere morbid anatomist, but afford a useful lesson to the practical physician.

The phenomena of this disease are calculated to throw much light on the nature of what has been termed wheezing. A person subject to asthma, who has been breathing tranquilly the whole evening, may be attacked towards midnight with difficulty of respiration, and a wheezing so loud as to be heard on the stairs; this will continue for several hours, and then terminate, in some with a copious discharge of sputa, in others without any expectoration whatever. When we apply the stethoscope to the chest of a person so affected, we hear a great number of bronchitic rales, showing that the larger and smaller tubes are both engorged; this is a matter of frequent occurrence in cases of dry asthma, where there is no expectoration, and where the fit terminates in a few hours, without leaving behind the slightest trace of pulmonary derangement. Hence we are led to the conclusion, that sounds of various characters and remarkable intensity may be produced without any inflammation whatever, and in fact without any remarkable alteration in the secreting functions of the bronchial mucous membrane, and that these sounds may wholly disappear where there has been no expectoration, and conse-

quently where the bronchial tubes have not been cleared out. This is a fact worthy of being held in memory. Stethoscopists, when they hear bronchial rales, are apt to attribute them to the existence of bronchial inflammation; but here, with distinct proofs of the absence of inflammation, you may have a maximum of bronchial rales, and in the space of a few hours, you may not have a single sound at the very points where so many were audible before. It is obvious, therefore, that some of the received doctrines on the subject of bronchial rales, are still open to discussion. The practical inference, however, to be drawn from this fact is, that we should study such rales with great attention, and in connexion with other signs and symptoms, lest we be induced to treat antiphlogistically a case in which depletion might be uncalled for or injurious, an error by no means unfrequent among those who rely too exclusively on physical signs.

As to the treatment of spasmodic asthma, I have nothing to add to what is generally known, except that it is often serviceable to stupe the whole chest during the fit with flannel wrung out of water, as hot as can be borne; and that, in some, much advantage is derived from small but very frequently repeated doses of ipecacuanha wine, mixed with an equal portion of good tincture of castor.

Dublin Journal of Medical Science.

# Cure of a Severe Gouty Pain by the Electric Ray. By Dr. A. CHAERETES.

N. SUFFERED three months without any evident cause from a very troublesome gouty pain in the first and second joints of the right fore-finger. He had used all the usual means against it, both internal and external, without benefit; on the contrary, the disease increased so much that he could not sleep during the greater part of the night, and in the day could not hold his pen. Thus he was going on one morning, trying to think of some new remedy by which he might possibly relieve his pain, and carefully avoiding meeting any one, lest an incautious touch might renew it now it was a little assuaged, when a fishing boat drew near to sell the fish her men had just caught. Among them the patient remarked the electric ray, and being acquainted with its electric properties, he bought it and carried it home alive in a vessel filled with sea-water. Although the fish was but small, yet it possessed a remarkable electric power; and the patient had scarcely touched it with the middle finger of the diseased hand, when he felt a severe shock and a peculiar pain in the elbow, with a numbness of the whole arm and of the forefinger that had been the seat of the pain. After the lapse of a quarter of an hour, the numbness gradually ceased, and there remained only the peculiar sensation in the elbow, and that in a less degree. The fore-finger still gave indeed severe pain, but only when it was moved. Two hours after a second experiment was performed, of which the results were similar but more violent, and with this difference, that the fore-finger could soon afterwards be voluntarily moved without any pain, and when moved by the other hand, gave not the usual severe suffering, but only an unusual and peculiar sensation. This condition continued without material alteration till seven in the evening. At that time when the patient again repeated the experiment and touched the fish with the fore-finger itself, he felt a

slight shock; but when he stimulated it with a piece of iron, he received seven shocks successively, and the fish soon after died.

That night the patient slept quietly; in the second he still felt only a numbness and weakness in the motions of the finger, which were completely removed by cold baths and the cold douche in five days more. Since that time the finger has been quite freely used, and there has not remained the least trace of its former condition.

[Dr. Bouros, by whom this case is communicated, has added some notes respecting the uses which the ancients made of electric fish, but they are not of much interest, and may be found in the Dict. des Sciences Med. art. Poisson. He believes the fish used in this case was the Torpedo Narke. There is no reason given for calling it a gouty pain (Gichtschmerze) of the finger; was it not rather neuralgic?] Casper's Wochenschrift.

On the Uncertainty of the Signs of Peritonitis and on a new Character of that
Disease. By Luigi Sementini.

THE chief object of this memoir, is to prove the fact which the author says he has tested by constant observation for upwards of forty years, namely, that in all cases of peritonitis, in whatever part of the abdominal cavity the inflammation is seated, there is pain in the pubes and upon the great trochanters; which if not spontaneously felt is always developed by pressure, and of which the severity is directly proportionate to that of the peritonitis.

This fact, which is said to be confirmed by the clinical observation of others, the author believes is explicable by the relation of the nerves of the parts in which the pain is felt to the peritoneum, and by its connexion with the fasciæ and muscles about them. In addition to its value in the diagnosis of even the most obscure and latent cases of peritonitis, in all of which this sign is present in a degree proportioned to the severity of the disease, the author has found it of value as an indication of treatment, and has obtained great benefit from the application of leeches and blisters over the trochanters instead of on the abdominal walls. Annali Universali di Medicina.

On the Utility of Graduated Compression of the Abdomen by Bandages, in the Treatment of Ascites. By Professor L. Morelli, of Siena.

From among many cases that were either cured or materially relieved by this mode of treatment, the author relates one in which its benefit was most strikingly shown. It was that of a woman upwards of fifty years old, who from poverty, and other sources of misery, had become gradually more and more ill, and had at length come to the Clinical Hospital with ascites from diseased liver. She had been salivated, and had undergone a variety of treatment, and had been tapped four times. The author recommended his system of bandaging, but for

a long time the patient refused to adopt it, and in the interval it was found necessary to perform paracentesis eight times more. After the twelfth operation the patient, now reduced to a most perilous state, agreed to submit to the bandaging, of which she had seen the good effects in a dropsical child. The best kind of bandage consists of a band extending from the lower third of the sternum to the pubes, and round to the loins, and there gradually tightened by means of strips of leather, with several holes in them for the passage of the points of small pins. The whole is prevented from shifting upwards by two strips of strong cloth which pass downwards, and are stitched behind in the neighborhood of the sacro-iliac symphyses. This apparatus being put on, and gradually tightened, the abdomen of the patient slowly returned to its natural size; the urine flowed abundantly, her appetite and sleep returned, and, at length, after nearly three years' ilness, in which she had used a variety of medicines, and had been tapped twelve times, she was restored to good health. A year afterwards, having discontinued the bandage, the ascites appeared again in a slight degree, but purgative medicines and the reapplication of the compression again speedily removed it.

At its first application, and for some days afterwards, the bandage produces great inconvenience; so much, that many patients refuse altogether to wear it for a sufficient length of time; but by a proper selection of cases, and careful management of them in other respects, the author asserts that compression will be found one of the most successful means that have ever been employed against ascites. It must be confessed, however, that he gives no indications, nor does he himself seem to have learned in which of the very different circumstances in which ascites occurs, his method is either applicable or likely to prove useful.

Ibid.

Observations on the Therapeutic Efficacy of Ammoniuret of Copper in Chorea.

By Dr. Fedele di Fiore.

Two cases are related of genuine chorea to prove the value of this once esteemed remedy, which in Italy passes by the name of "the Specific of Stissero." In each case nearly all the usual and most active methods of treatment had been adopted before this was resorted to; bleedings, leeches along the spine, anthelmintics, purgatives, cold baths, and various antispasmodics had all signally failed to produce benefit, when the ammoniuret of copper was commenced. In doses beginning at one-eighth, and gradually increased to half a grain twice a day; the latter effected a gradual but perfect cure; in one case within two months, in the other in one month. Annali Clinici dell' Ospedale degl' Incurabili.

On a Sedative Lotion in Headaches, Congestions, and Cerebral Fevers.

By M. RASPAIL.

PROFESSOR RASPAIL in a letter to the editor of l'Expérience, gives the mode of preparing a lotion, the sedative effect of which, he says, is almost instantaneous. It is as follows:

Liquor of ammonia (Qy. th	. 100 parts	
Distilled water		. 900 "
Purified marine salt		20 "
Camphor		. 2 "

Essence of rose or some other scent, in the necessary proportion. The whole dissolved cold.

A piece of linen is to be steeped in this solution and applied over the part of the head that the patient points out as the seat of pain, taking care, if it is on the forehead, to apply a thick bandage over the eyebrows, to prevent any drops of the fluid passing into the eyes.

M. RASPAIL says he has seen headaches intolerably violent, accompanied by photophobia, and retraction of the globes of the eye, disappear completely, from a quarter to half an hour after the application of one wetted cloth. The linen is to be soaked as often as a new access of pain is threatened, and left on the head until it is necessary to soak it anew. In the numerous trials the author has made with this solution, first on himself and afterwards on others, he has been struck by two circumstances of interest in connexion with organic chemistry, and symptomatology. When in a violent attack of cerebral fever, we apply on the principal seat of the inflammation a concentrated solution of marine salt, an evident odour of chlorine is disengaged, the diseased reaction being analogous to the decomposing and deoxygenating action of manganese, in the elimination of chlorine from marine salt, by means of sulphuric acid. Is this sign constant in affections of this class? It is for experience to decide. When on the contrary we employ a solution of ammonia, a strongly characterized hircine (goatish) odour is manifested. The same odour has been disengaged on the application of hydrochloric acid to the skin. M. RASPAIL has drawn the attention of the profession to this subject in order that they may employ this formula, and fix their attention on the analysis of the disengaged substances, as they may become characteristic of special affection. L'Expérience.

On the Employment of large Doses of Tartarised Antimony in the Treatment of Articular Dropsies. By M. GIMELLE.

M. Gimelle, who some time ago published a series of facts, illustrative of the utility of tartar emetic in hydarthrosis, has continued his observations, and finds that when an articulation is the seat of synovial effusion, the same treatment is the most effectual for procuring speedy resorption. In twenty-eight cases the emetic tartar was given in increasing doses, commencing with four grains in the twenty-four hours, and increasing two grains daily till the dose was sixteen, eighteen, or twenty grains per diem, with the invariable effect of determining the resorption of the liquid in a space of time, varying from eight to sixteen days. Of twenty-eight cases of effusion of synovia into articulations, twenty-two had their seat in the knee-joint; three were double, and two were in the shoulder-joint; one was in the elbow, and one in the ankle. All the patients took the emetic tartar in infusion of linden tree with syrup of poppies. In eighteen the tolerance was established on the first day, in two on the second, and in two on the

third. No accident occurred to any of the patients after the tolerance was established. The dose of twenty grains was never exceeded, and in all the cases the effusion was absorbed in the space of eight, ten, or sixteen days—longest period during which the remedy was administered. In twenty-five cases the pain and stiffness felt in the affected articulations diminished at the same time and degree with the effusion, and when the latter had disappeared, the patients could walk as easily as before they were attacked by the disease. In two cases, however, though the liquid disappeared in the ordinary time, the pain remained in one case for a month and in the other for forty days. In one case the remedy was carried to twelve grains without benefit, and as it was one of very old standing, it was thought proper to relinquish the medicine.

We give the following cases, as they are very interesting proofs of the value of the treatment employed.

Case I. A man, aged seventy-three, was affected by a very large hydarthrosis of the left knee, which extended into the hollow of the ham, where it formed a tumour of the size of the fist, which disappeared on strong pressure, and became visible on each side of the patella. M. Pasquier prescribed the emetic after the form of M. Gimelle. The dose was successively carried to 16 grains; the patient experienced no inconvenience, his appetite continued good, and on the sixteenth day all the signs of effusion into the articulation had disappeared. Two days afterwards the patient was dismissed entirely cured.

CASE II. On the 10th of September, M. GIMELLE was called to a student, aged twenty-one years, with an hydarthrosis of the right knee, which had been treated without success during six weeks by leeches, blisters, compression, frictions, and embrocations. M. GIMELLE prescribed the tartar emetic. The patient's appetite continued good, and he had no inconvenience. The dose of twelve grains was not exceeded, and fourteen days after this treatment was commenced there was no trace of synovial effusion, the patient feeling merely a feebleness of the limb.

CASE III. A healthy female, aged twenty-three, in a journey from Tours to Paris, caught cold during the night, and, on her arrival in the capital, experienced pains in the right knee. M. GIMELLE considered this case one of commencing hydarthrosis, and prescribed without delay a gummy potion with four grains of tartar emetic and an ounce of syrup of poppies. Five or six vomitings, and afterwards alvine dejections followed, but the pain was relieved in the night and the patient could move the limb. On the second day the catamenia appeared, and the emetic was suspended for five days, during which the pain reappeared and the effusion increased, and the articulation became very red and hot. emetic was then resumed, four grains being given on the first and second day; it produced three or four vomitings, and as many stools. Tolerance was established on the second day, there was a diminution of the synovial tension, and the patient could bear slight movements of the limb without much pain. On the third day six grains were given, eight on the fourth, ten on the fifth, twelve on the sixth, and fourteen on the seventh; the tolerance continued, and the amelioration was progressive. On the eighth, ninth, and tenth days, sixteen grains were given, and on the tenth day the synovial effusion had completely disappeared.

In none of these cases did M. GIMELLE precede the employment of the tartar emetic by local or general bloodletting. Nevertheless, he thinks that if the fever

be intense, and the articulation present great heat and redness, or if there be great irritation of the digestive organs, it would be proper to combat these symptoms before administering the emetic tartar. By this preliminary treatment we should diminish the chances of gastric irritation, probably facilitate the tolerance, and consequently the action of the remedy.

The most constant effects of the tartar emetic were diminution in the force and rapidity of the pulse, enfeebling of the voice, fatigue and coloration of the eyelids (known by the name of yeux cérnes,) and abundant perspirations during the night. Five patients had vomitings, two during one day, one two days, and two during three days. Eight had very abundant alvine dejections, lasting from one to three days; in three the vomiting and purging coexisted. Sixteen experienced neither vomiting nor purging. In the majority the appetite was unaltered; and in those cases where it was disturbed, it was re-established with the tolerance. The quantity of urine was diminished, which M. Gimelle attributed to the abundant perspirations. All the other functions were performed as in the healthy state. The quantity of food the patients had taken when in health was not diminished, and often increased. Lastly, M. Gimelle saw all the patients some months after treatment, and many of them after some years, and in none did any accident occur. Bulletin Général de Thérapeutique.

# New Mode of treating Vesico-vaginal Fistula.

Dr. Reid exhibited at a meeting of the Westminster Medical Society, an instrument which he had employed with success in cases of vesico-vaginal fistula. The apparatus consists simply of an India-rubber bottle, to the neck of which is attached a stop-cock and a condensing syringe. The bottle is introduced into the vagina in a collapsed state; it is partly filled with air by its own elasticity; its size is afterwards increased to any extent which is necessary by the use of the syringe; by this means the aperture was so entirely filled up, that no urine could possibly escape, provided the bottle was air-tight. By the employment of this means, Dr. Reid had succeeded in curing one case of vesico-vaginal fistula, which had existed for six years; and in another case of some standing, the aperture was so much diminished that a cure would no doubt be effected. The bottle he had frequently, also, employed as a common pessary, and had found it of much service. It required to be removed at night for the pupose of being cleansed.

He had thought for some time that this mode of treating vesico-vaginal fistula had never been employed previous to the time he first commenced its use; but his attention had been lately directed to an article in the 6th volume of the "Medico-Chirurgical Transactions," by Mr. Barnes, of the Exeter Hospital. This gentleman, it appeared, had so long ago as 1815, succeeded in curing a case of the fistula in question, by keeping a common India-rubber bottle, with a piece of sponge sewn on the part which was to come in contact with the fistulous opening, constantly in the vagina. In this case, however, the inconveniences were great and discouraging. Thus it was stated, that whenever the bladder required to be evacuated, the sponge had to be depressed with the finger; and if the catheter were not employed every two hours, the urine dribbled through the opening. With the use of the simple apparatus, which he (Dr. Reid) had that evening exhibited, these inconveniences were all avoided.—Lancet.

### Precocious Puberty.

An extraordinary case is related in the Medical Gazette, of a female child, Jane Jones, now seven years of age, who has the form of a full-grown woman. She measures four feet three and a quarter inches, and twenty-nine inches round the chest, and weighs seventy-two avoirdupois pounds. Her breasts exceed the usual size of these organs in unmarried adults. Her mother says that the catamenial periods are regular, although she has the general appearance of a girl of thirteen. The faculties of the mind are not superior to children of the same age, and her amusements are those of a child. She displays a degree of modesty in her conduct towards the other sex, that is unusual in children. Precocious puberty is oftener seen in males than females: this case, therefore, may be regarded as a very marked one.

#### SURGERY.

On the Use of Mercurial Plaster ("Emplâtre de Vigo") in preventing Deformity after Smallpox. By M. Chomel.

A YOUNG girl is under M. CHOMEL, in the Hôtel Dieu, who has been vaccinated, but she says without effect. The variolous eruption, which is demiconfluent, was preceded by the ordinary symptoms. A mask, made with the plaster of Vigo, was applied to the face on the second day of the eruption. The patient tore it off within twenty-four hours, but, notwithstanding this, the result is very remarkable. On the neck, chest, and all the rest of the body, the variolous pustules were developed with all their distinguishing characters: opaque, umbilicated, and surrounded by a bright red areola. But on the face the course has been very different; instead of pustules we see acuminated vesicles, or solid papulæ. On some points where the plaster had not adhered, small pustules are perceived; where it had, we search for them in vain. It appears impossible, on the simple inspection of this patient, to state that mercury has not exercised a local action, specific and advantageous; for the patient will not be scarred, and will be speedily convalescent.

In another ward is a patient already convalescent, who has been submitted to the same mercurial treatment, and the desquamation has followed its ordinary course, except on the face, where scales have not formed. In another bed in the same ward is a woman five months and a half advanced in pregnancy, in whom the plaster has entirely averted the eruption from the face: small whitish papulæ supplying the place of the pustules. Desquamation has not taken place, except on the lips and eyelids, where some pustules appeared; but the mask of plaster did not extend to these parts. The treatment is well worthy of further trial.

Bulletin Général de Thérapeutique.

On Itch and its Treatment. By Dr. DE LA HARPE, Chief Physician of the Hospital of Lausanne.

THE author gives the following formula for an ointment which he has employed in upwards of four hundred patients. It does not appear to irritate the skin, and

is said to be better than the liniment of Valentin or the alkaline sulphur ointment of Alibert. The mean duration of treatment was eighteen days in 1836, fifteen in 1837, eleven in 1838, and ten in 1839. The formula is as follows:

Flowers of sulphur . . . 16 parts.

Sulphate of zinc . . . 2 ...

Powder of white hellebore . 4 ...

Soft soap . . . . . . . . . . . . . . . 62 ...

Gazette Médicale.

On the use of Boiling Water in the Treatment of Callous Fistulæ.

By Dr. Ruppius, of Freiburg.

THE author was induced to adopt this method of treatment from what he had seen it effect in the hands of Rust of Vienna, and from the observation that the granulations which grow from scalded parts of the skin are peculiarly florid, and prone to unite firmly; a consideration which, we may add, long ago induced French surgeons to adopt the actual cautery for the same means, and is the foundation of the very skilful operations of M. Lallemand for vaginal fistulæ. Two cases are related, one of recto-vaginal fistula from abscess after a severe labor; the other, of an incomplete fistula in ano, extending four inches up the side of the rectum. The treatment consists in introducing the pipe of a syringe filled with boiling hot water down to the further end of the fistula, (which, if necessary, must be closed there with a finger of the other hand,) and slowly injecting a part of the contents. At the first operation only so much of the water should be forced in as is sufficient to stimulate the end of the fistula, so that it may commence healing at its deepest part, and, after the repeated injections, may make gradual progress in healing towards the surface. In both the cases that are related this procedure was strikingly successful. Fricke and Oppenheim's Zeitschrift.

# On a New Method of Operating for the radical Cure of Hernia. By M. Velpeau.

THE author of this memoir, after examining at length the various means hitherto employed for the cure of hernia, states that he finds none of them at all efficacious; he therefore determined to try another method. Convinced from repeated experiments that injections with tincture of iodine produced in the serous membranes and adhesive inflammation, slight and scarcely dangerous, he attempted the radical cure of hernia by these injections. Three patients were operated on by him in the years 1836 and 1837, but the difficulties of a first operation, and the vagueness of the results, still left him in doubt, and he afterwards employed a method in two cases consisting of three distinct steps: subcutaneous puncture, scarification of the interior of the sac, and compression. He took the idea of scarifications from the ancients, or rather from what he had himself advanced in the year 1832. Twice that year he had placed great confidence in them, and only discontinued their employment when he perceived that danger was likely to ensue

to the patient from opening the sac. These dangers seemed no longer likely, when M. Guerin gave the hint of the possibility of penetrating to the bottom of the cavity, by a simple puncture of the integuments, and expressed in his memoir his desire of applying his subcutaneous incisions to the radical cure of hernia. M. Velpeau has performed the necessary scarifications in this manner. With regard to the compression, he applies it not only to the external abdominal ring, but over the internal ring, and the inguinal canalitself. He employs the celebrated bandages of M. Fournier of Lempdes, which he states have more than once sufficed for the radical cure of hernia.

M. Velpeau successfully operated on a patient in the following manner: having introduced the index-finger for some lines in depth into the external abdominal ring, he pushed the integuments before it, and passed a sort of lancet over the nail of this finger, pushing it obliquely as far as the iliac fossa; then withdrawing his finger from the ring, he brought the edge of the instrument against the iliac walls of the abdomen, which he supported with the other hand, and then scarified them in various directions, taking especial care to avoid the epigastric vessels. The lancet was then withdrawn at the exact spot where it had entered, and the operation was complete, only a few drops of blood having been lost. The patient was taken to bed, no accident occurred, the small wound cicatrized by the next day, the bandage of Fournier was applied on the third day, and the man has since walked and conducted himself as if he had never been afflicted.

Encouraged by this result, the patient demanded a similar operation on another hernia. It was performed, and at the end of ten days he was convalescent. He has since continued quite well, and has remained as a cook in the hospital to show the radical cure to the profession. Bulletin Général de Thérapeutique.

#### MIDWIFERY.

Case of dangerous Uterine Hemorrhage in which Transfusion was successfully employed, with some observations on the more frequent expediency of that operation. By Richard Oliver, M.D., Carlisle.

On the 26th of June 1837, I was called to attend the wife of John Cook, a weaver, living at Eden Place, about a mile from my house. She had been attended by a midwife, and had given birth to a child at its full time in the course of the previous night. The patient was about forty-two years of age, and this was her seventh child. I found her at six a.m. in an exceedingly exhausted condition. Blanched by a profuse hemorrhage, which no adequate means had been employed to suppress, but which had now ceased, she was lying on her back in a state of imperfect consciousness, with the pulse at the wrist barely perceptible, now and then moaning lowly, and casting about her arms. About half a glass of rum with a little water was immediately given to her, and this, with a few spoonsful of beef tea, was repeated two or three times at intervals of about twenty or twenty-five minutes. After each dose she appeared to be a little refreshed, but upon the whole the symptoms of collapse was gaining ground. About half past seven o'clock brandy was substituted for the rum, and the dose was in-

creased to an ounce and a half, with the addition of a drachm of aromatic spirit of ammonia and a few drops of tincture of opium to every second or third portion. The same deceitful promises of reaction were succeeded by the same progressive indications of sinking, until at length, about one P. M., she became quite unable to swallow. The pulse at the wrist and in the carotids had not been perceptible for more than two hours and a half, and the coma was now complete. Under these very unpropitious circumstances I determined upon transfusion, with little hope of success, and with no small compunction for having thus afforded the operation so little fair play. At half past one P. M. I was provided with the apparatus necessary for performing it; and having obtained a willing supply of blood from three of the patient's kindhearted neighbors, I opened a vein at the bend of her arm, and with the assistance of two of my professional friends, Mr. Bowman, surgeon of this place, and Dr. Henry Lonsdale, now Demonstrator of Anatomy in Queen's College, Edinburgh, I proceeded cautiously and steadily to introduce it.

I had first taken care to see that the instrument was in proper order, and particularly that I should have the syringe and its tubes free from air. After one or two gentle strokes with the piston, made with a view to ascertain this point, I found that the cup attached to the apparatus was so small that it could not be safely used. Unless the piston was elevated very slowly, and the blood was supplied very steadily to the cup, there was great risk of introducing air into the cylinder. But finding that, by taking a common basin to receive the blood, and by drawing it up thence through the bottom of the syringe, I could obviate this danger, I laid the cup aside altogether. With this simple arrangement I passed syringeful after syringeful into her exhausted veins, pausing from time to time to mark the effects, and anxiously watching for some glimmering promise of the return of energy to her heart. On a moderate computation we had already transfused twelve ounces of blood, and she still lay pulseless and perfectly insensible. The respiration, however, although faint and low, was distinct and regular; so that, however small the amount of blood in her system might be, there was still some undergoing aeration in the lungs; and in gradually augmenting its quantity, we might possibly contribute to raise her vital powers, by enabling a larger portion of it to reach the nervous centres. We could not discern the heart's pulsations, but we might be quite certain that it did beat, and that the general circulation, although thus imperceptible, was still actually carried on. We had yet obtained no assurance of improvement, but it was pretty evident that, by proceeding cautiously, we neither had done nor could do any harm. Without this expedient the poor woman's death was inevitable, and but too probable we then thought even with it; so, disregarding the cautions given upon this point, we determined to go on. Steadily and slowly the blood was introduced as before, until at length we imagined, that the pulse became faintly perceptible in the arm; and slight as it was, this intimation of the heart's increased power gave us no small encouragement. After persevering for a few minutes longer, we had the very perfect gratification of witnessing not only the complete restoration of the circulating power, but the return of consciousness, and of the ability to speak. It is unnecessary to advert to the subsequent details of the treatment and of the recovery, farther than to mention that she went on very favorably, and in a few weeks was moving about in her family as usual. She remained for some time longer rather weak and delicate, but beyond an occcasional slight headach, and a tendency to constipation and flatulence, she suffered from none of the more prominent and distressing symptoms which ordinarily ensue after serious losses of blood, and she has long been, and still remains, in very good health. With respect to the quantity of blood introduced in this case, I am not able to speak with absolute accuracy; but I feel quite certain that I am below the mark in mentioning twenty-two ounces. From each of the three individuals who supplied the blood, we took at the least an average of twelve ounces; and although we did not attempt to measure the amount of it, I am perfectly satisfied that, at all events, not more than one-third of the whole was lost by coagulation, and by being thrown upon the ground in adjusting and preparing the instrument. Edinburgh Medical and Surgical Journal.

# MISCELLANEOUS NOTICES.

#### ANNUAL CONVENTION

OF THE

## MEDICAL AND CHIRURGICAL FACULTY OF MARYLAND.

At the annual meeting of the Faculty, held in Baltimore on the 7th, 8th and 9th of June, 1841, the following officers were elected for the ensuing year.

DR. MAXWELL McDOWELL, President.

- " ROBERT A. DURKEE, Recording Secretary.
- JOHN L. YEATES, Corresponding Secretary.
- " J. I. COHEN, Treasurer.
- SAMUEL CHEW, Orator.

Dr. Maxwell McDowell having resigned the Presidency, the Convention elected Dr. Joel Hopkins to the Chair, and tendered a vote of thanks to Dr. McDowell for his impartial and faithful discharge of the duties annexed to the office of President of that body.

#### The Western Board of Examiners.

Drs. Thomas Wright, George S. Gibson, J. H. Briscoe, Robert A. Durkee, Alexander F. Dulin, Peter Snyder, Samuel Annan.

#### Eastern Board.

Drs. Tristram Thomas, Peregrine Wroth, George Martin, Alexander H. Bayley, James Bordley.

Directors of the Library of the Medical and Chirurgical Faculty.

Drs. J. Fonerden, George S. Gibson, J. H. Briscoe, J. I. Cohen, Alexander F. Dulin, Samuel Annan, Samuel Chew, James Bordley, T. Worthington.

SAMUEL CHEW, M.D., Librarian.

#### CENSORS—Western Shore.—CITY OF BALTIMORE.

Eighth Ward, Dr. Alexr. F. Dulin, First Ward, Dr. H. Inloes, Second do. " P. S. Kinnemon, Ninth do. 66 Arthur Rich, Jr. Tenth Third do. " J. B. Owens, do. "A. Schwartz, Fourth do. " Edward Deloughery, Eleventh do. "H.G. Jameson, Fifth do. " Amasa Kellogg, Twelfth, do. "Alexr. Robinson, Sixth do. " Peter Snyder, Thirteenth do. "James Armitage, Fourteenth do. " J. H. O'Donovan. Seventh do. " Charles Maguire,

CITY OF ANNAPOLIS.—Dr. Dennis A. Claude, Dr. John Ridout.

CITY OF FREDERICK.—Dr. E. Y. Goldsborough, Dr. Jacob Baer, Dr. Jefferson Shields, Dr. Thomas W. Johnson.

# COUNTIES-Western Shore.

ALLEGANY COUNTY .- Dr. J. M. Lawrence, Dr. Samuel P. Smith.

WASHINGTON COUNTY.—Dr. L. Clagett, Dr. James Hayes.

FREDERICK COUNTY.—Drs. Richard Dorsey, Jacob Baer.

CARROLL COUNTY.—Drs. J. L. Billingslea, N. Brown, J. Shower, J. Swope.

BALTIMORE COUNTY.—Drs. John D. Readel, Josiah Marsh, Isaac Cole.

HARFORD COUNTY.—Drs. S. L. Horton, T. Worthington, J. Montgomery, J. Preston.

MONTGOMERY COUNTY.—Drs. Otho Wilson, Wm. P. Palmer, H. Wilson.
ANNE ARUNDEL COUNTY.—Drs. Joel Hopkins, John H. Owings, L. T.
Hammond, Gustavus Warfield.

PRINCE GEORGE'S COUNTY.—Drs. B. Day, T. Lee, E. H. Calvert, G. Tyler. CALVERT COUNTY.—Drs. John Broom, Richard Mackal, Thomas Blake.

CHARLES COUNTY.—Drs. William Queen, J. R. Ferguson, Francis Neale. ST. MARY'S COUNTY.—Drs. Brown, Ch. Briscoe, Wm. G. Edelen, Jos. Ford.

#### COUNTIES-Eastern Shore.

CECIL COUNTY.—Drs. A. Evans, John Fisher.

KENT COUNTY .- Drs. Edward Scott, Peregrine Wroth, M. Brown.

QUEEN ANNE COUNTY.—Drs. J. K. Harper, R. Goldsborough, Jr., J. Bordley.

CAROLINE COUNTY.—Drs. George T. Martin, H. F. Rosset, Wm. Hemsley. TALBOT COUNTY.—Drs. S. T. Kemp, Sydenham Russum, Edward Spedden. DORCHESTER COUNTY.—Drs. W. Jackson, F. P. Phelps, A. H. Bayley.

J. Woolford.
SOMERSET COUNTY —Drs S K Handy S J S Kerr

SOMERSET COUNTY.—Drs. S. K. Handy, S. J. S. Kerr. WORCESTER COUNTY.—Drs. T. S. Martin, J. P. Giles.

#### COMMITTEE ON EXPERIMENTS,

In vaccine and variolous matter and the grease of horses.

Drs. John H. Briscoe, J. J. Graves, S. Chew, John L. Yeates, R. A. Durkee

### COMMITTEE ON REVIEW,

Of the progress and improvements in American and Foreign Medicine and Surgery.

Drs. John R. W. Dunbar, John Fonerden, George S. Gibson, Alexander C. Robinson, Samuel Annan, Nathan R. Smith, William Power.

#### EDITORIAL COMMITTEE,

For the publication of the Medical and Chirurgical Journal of Maryland.

Drs. George C. M. Roberts, John R. W. Dunbar, Samuel Chew, Robert A. Durkee, N. R. Smith, R. E. Griffith, Samuel G. Baker.

ROBERT A. DURKEE, M. D.

Recording Secretary.

### UNIVERSITY OF MARYLAND.

March 11th, 1841. The Annual Session of the Faculty of Physic was closed this day with the ceremonies of the Annual Commencement. Of the class of ninety Students who matriculated, the following twenty-four received the degree of Doctor of Medicine.

VINCENT M. BUTLER, Virginia	Syphilis.		
JAMES H. CUNNINGHAM, Pennsylvania	Delirium Tremens.		
SAMUEL A. DAVIDSON, Maryland	Gastritis.		
WILLIAM C. DURKIN, Virginia	Fractures.		
PHILIP R. EDELEN, Maryland	Inflammation.		
THOMAS C. GANTT, "	Dysentery.		
JOHN P. GUNN, "	Urethritis Specialis.		
BENJAMIN R. HALL, "	Delirium Tremens.		
EDWARD M. HALL, "	Iodine.		
JULIUS HALL, "	Pneumonia.		
THOMAS Y. HENRY, Virginia	Luxation.		
MILLS M. JORDAN, Virginia	Erysipelas.		
EDWARD A. MARIS, Maryland	Club Foot.		
ELISHA B. PENDLETON, Virginia	Ulcers.		
NELSON C. READ, Maryland	Dyspepsia.		
JAMES A. REED, "	Secale Cornutum.		
THOMAS REYNOLDS,. "	Osteogeny.		
JOHN RIDGELY, "	Dropsy.		
WILLIAM H. ROBERTS, Maryland	Cynanche Trachealis.		
THOMAS W. ROUNTREE, Ireland	Dyspepsia.		
JAMES S. STEVENSON, Kentucky	Venesection.		
WILLIAM P. WILLIAMS, Maryland	Menstruation.		
HENRY G. WIRT, Florida	Acute Gastritis.		
HATTERSLY P. WORTHINGTON, Maryland	Neuralgia.		

The honorary degree of Doctor of Medicine was conferred upon

JOHN W. GLONINGER, Lebanon county, Pa.
ANTHONY A. McDONOUGH, Berks county, Pa.
HENRY P. SARTWELL, Yates county, N. Y.
PEREGRINE WROTH, Kent county, Md.

WILLIAM E. A. AIKIN, Dean.

#### WASHINGTON UNIVERSITY OF BALTIMORE.

The following gentlemen received the degree of M.D. at the close of the Session of 1841:

WILLIAM VOGLESON, Pa..... Fracture Cervix Femoris.

The honorary degree of Doctor of Medicine was conferred on the following gentlemen:

Dr. DAVID UMBERGER, of Jonestown, Pennsylvania.

Dr. CHARLES N. BARLUCKY, of Gettysburg, Pa.

Dr. DAVID HORNER, do. do.

Dr. E. BALFOUR, of Norfolk, Va.

JOHN R. W. DUNBAR, Dean.

## ARMY INTELLIGENCE.

The following gentlemen were approved on examination by the Army Medical Board, on the 25th of May, 1841, and have received appointments as Assistant Surgeons U.S.A. viz:

CHARLES ISAAC, Mississippi; RICHARD H. COOLRIDGE, N. York; ROBERT S. HOLMS, Pennsylvania; CHARLES W. STEARNS, Massachusetts; WILLIAM LEVELY, Maryland; DABNEY HERNDON, Virginia.

The following gentlemen, Assistant Surgeons, were at the same Board examined for promotion to Surgeons, viz:

ALEXANDER F. SUTER, CHARLES HITCHCOCK, WILLIAM MAFFITT.

# NAVY INTELLIGENCE.

The following gentlemen, Assistant Surgeons of U.S.N. have been examined by the Naval Board, recently held in Philadelphia, and found qualified for promotion:

CHARLES A. HASSLER, of date 1834; DAVID HARLAN, of date 1835; VICTOR L. GORDON, of date 1835; ROBERT WOODWORTH, of date 1835; J. DICKINSON MILLER, of date 1836.

The following gentlemen examined by the same Board, have been found qualified for admission into the U.S. Navy, as Assistant Surgeons, viz:

1. Andrew H. Henderson; 2. Ellis Hughes; 3. John Hastings; 4. Charles H. Broughton; 5. R. T. Waxwell; 6. Edward McKinley; 7. Alexander Y. P. Garnett.

#### OBITUARY.

Death of Thomas Miner, M.D. of Connecticut.—Below, we insert a letter from Dr. Woodward, of the Worcester Insane Hospital, announcing the melancholy intelligence of the death of Thomas Miner, M.D. whose name and professional character are familiar to the medical public of this and other countries. He was the joint author, many years since, with Dr. Tully, of a work on typhus fever, was a past president of the Medical Society of Connecticut, and was distinguished for high literary and intellectual attainments. From the commencement of this Journal, he has been a steady contributor, and has probably furnished a greater amount of original matter, on a variety of subjects, than any other correspondent. We hope to obtain a biographical memoir of his useful life, for publication in the Journal.

"DEAR SIR,—Our mutual friend, THOMAS MINER, M.D. died at my residence this morning at half past three o'clock. The doctor, as you probably knew, had for twenty years or more been affected with a disease of the heart, which had prevented his engaging in active business. During the winter he has suffered extremely with this disease. Early in March he came on to Worcester to see what could be done to alleviate his sufferings, and, as he said—'if he could not be relieved, to die with his friend.' Soon after he arrived here, we discovered ædema of his feet and ankles, which pointed, too clearly to be mistaken, to the fatal mischief that was lurking within. The symptoms of dropsy were rapidly developed. He was unable to lie down, and spent a large part of each night in his chair. Three weeks ago he took cold, which resulted in pneumonia. This disease was severe, and for some days threatened his life. Quite unexpectedly, he got better. and for a week indulged hopes that he should return to his friends in Connecticut. He did not, probably, from the first appearance of dropsy, expect to recover. The acute disease of the lungs was soon followed by great increase of the disease of the heart and general dropsy, which terminated fatally this morning.

"Dr. Miner was a remarkable man. He has left behind him few as ripe scholars, profound philosophers and philanthropists, in the medical profession. Ill health having for some years precluded active engagement in professional duties, he has devoted his whole time to study and reflection. His mind was very active to the last. He was perhaps the most learned physician in New England—not only in professional attainments, but in foreign languages and theology. He was acquainted with the French, Italian, Spanish and German languages,\* and was often employed by publishers in this country to translate them. He was particularly fond of the German, and read works on medicine, theology and philosophy, in that language, with great pleasure.

"You well know his estimable moral and social qualities. His heart was benevolent, his feelings kind. In his life he exemplified the christian character; in sickness and death he bore testimony of unshaken confidence in the christian hope of a joyful resurrection. Dr. M. was sixty-four years of age.

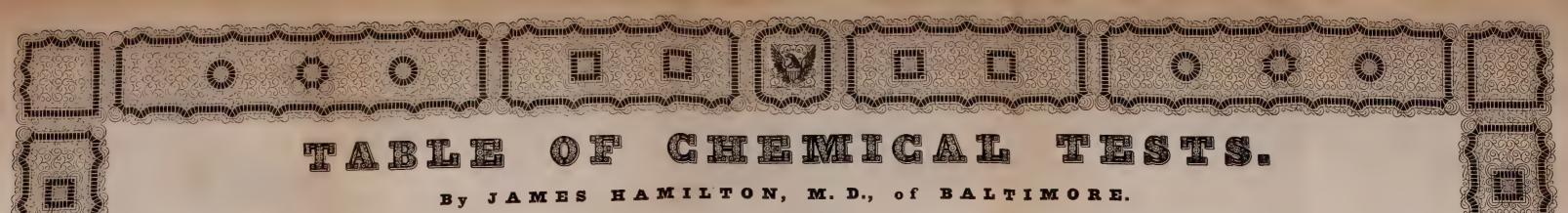
In great haste, yours truly,

Worcester, April 23, 1841.

S. B. WOODWARD."

[Boston Med. and Surg. Jour.

<sup>\*</sup> Dr. Miner was also well versed in the Hebrew, Greek and Latin languages.



Prepared for the Maryland Medical and Surgical Ionrnal.

pipini de Propins

propinitation de la constitución 
heirindeining

>					,						
AGENT.	TEST.	COLOR.	COMPOUND FORMED	. AUTHOR.	REMARKS.	AGENT.	TEST.	COLOR.	COMPOUND FORMED.	AUTHOR.	REMARKS.
	(Brazil wood, Tincture of	. Red, )			The color of the Test may be restored by an alkali; or if the	anti	Acid, Hydrosulphuric Galls, Tincture of	Orange,	Sesquisulphate of A Sesqui-Oxide of A. and		Soluble in pure Potassa.
ACIDS GENERALLY.	Elder berries, "	Red,		1 {	acid be gaseous, on heating it, the blue color of the Test will be restored.	Antimony	)	White.	Tannin.		
ACIDS GERERREE	Red Cabbage, "	Red,		i li	be restored.	Arsenic	bee Acid, Arsenious.				
			Sesqui-Sulphuret of A.	Schweigger.	Same precipitate occurs with Antimony, Tin, Cadmium and	Baryta	Acid, Sulph. or any soluble sulphate Alkaline Carbonates,	White	Sulphate of B		Insoluble in any acid.
	Acid, Hydrosulphuric	18110W 1-100,000 St.	Desqui Darpmarer		Selenium. If the fluid becomes yellow without depositing Sulphuret of A. it should not be regarded as Arsenious, but	Diamout!	Acid, Gallic	Orange Vellow,	Gallate of B.		
					Nitric Acid—(Berzelius).	Bismuth	Potassa, Ferrocyanate of Water,	Yellow. White,	Undanta		
	Cobalt, Hydrochlorate of	Rose Red, Green,	Arsenite of C. Arsenite of C. and Sul-		A Colombia A Colombia	Bromine	Chlorine,	Red fumes,	Bromine,		Chlorine separates Bromine from all its combinations.
		,	phate of A		Precipitate is turned brownish red by Hydrosulphuric Acid; yeltow by Nitrate of Silver, and blood red by Ferrocyanate of	Chlorine	Fused with Boray.	Green			Blackens on exposure to light,
					Potassa, and is insoluble in Ammonia. If soluble in Ammonia, with a yellow color, it must be a Carbonate or Chromate		Acid, Oxalic	Rose,	Oxalate of C	Henry.	
				P	of Copper.  Must be neutralized by an alkali.—If Iron, Corbonate of Potas-	Cobalt	Alkalies,	Black,	Proto-Sulphuret,	HENRY.	
	Copper, Sulphate of	Green 1-110,000 .	Arsenite of C	DERGMANN.	sa or Juice of Onions appear, a green precipitate will also	:	Potassa, Ferrocyanate of Acid, Hydrosulphuric	Grass Green.			
	Iodine, in a solution of Starch, so				ensue.	1	Ammonia,	Blue,	Ammoniuret,		Nickel will produce the same effect; a plate of Zinc will pre-
Acid, Arsenious	as to make a blue fluid,	Redish br. gradually		BRUGNATELLI.	Bi-Chloride of Mercury has the same effect, except that Sul-	Copper	1				cipitate the Copper if present, first acidulating with Sulphuric Acid.
Acia, Arsenious		becoming coloriess.			phuric Acid will restore the blue color if destroyed by Arsenious Acid.	Corrosive Sublimate.	Potassa, Ferrocyanate of	Dark Brown.			1
	Iron, Bin-Acetate of	Bright Yellow,		SYLVESTER.	mous recui	Gelatin.	Tannin	Brown 1-2,000			Same occurs with Albumen, but not instantly.
	Lime water (in excess) Mercury, Bi-Chloride of	White, (flocculent)	Arsenite of Lime.				Alkalies, (fixed)	Yellow,	Oxide,	URE	Soluble in Nitric Acid, to which it communicates a blue color. Soluble in Sulphuric, Nitric and Muriatic Acids.
	Patassa, Chromate of	Deep Green 1-20 .	Chromic Oxide and Ar- seniate of Potassa,	Coopen	Takes 15 to 30 minutes to act. Copper will give a similar pre-	Gold	Iron Proto-Sulphate of	Brownish Yellow,	Oxide,		Fulminates when gently heated.
	Potassium, Iodide of	White		EMMET	cipitate, but is turned blue by Ammonia.	Iodine	Tin, Proto-Muriate of	Purple,	Oxide of Gold and Tin.	COLIN	Starch must be cold.
	Totassium, Toutde Ot	Time, Time		10.0001	cipitate, but is turned blue by Ammonia.  Precipitate is turned yellow by Muriatic and cold Sulphuric acids, and dark brown by Nitric and hot Sulphuric. Milk, tea and collee, interfere in its use.		Alkalies,	White,	Hydrate,		Turn first green, and then red, on exposure.
	Silver, Ammonia, Nitrate of	Yellow,	Arsenite of Silver and		tea and conce, interiers in its use.	Iron, Protoxide	Potassa, Ferrocyanate of	White,	Carbonates, Ferrocyanate,		" se se se se blue, " "
	Silver, Nitrate of	Yellow (1-600 gr.)	Nitrate of Ammonia, . Arsenite of Silver,	MARCET. HUME	Must be first neutralized by an alkali, and even then is liable					1	Decomposed by Ammonia into Benzoate of Am. and Peroxide of Iron.
					to many objections, as Alkaline Phosphates, Hydrochloric Acid, and Chloride of Sodium give a similar precipitate.	Iron, Peroxide	Ammonia, Succinate of	Blood Red.		KLAPROTH.	
	Titanium, Nitrate of	Yellow,		McGregor	Phosphoric Salts have the same effect.		Galls, Tincture of	Black,	Gallate. Ferrocyanate.		
	Cobalt, Amm. Muriate	Rose,	Arseniate of C		Must be first newballiged by an Albeli		Acid, Hydrosulphuric	Riack	Proto-Sulphuret. Chloride of L		Soluble in water, Nitric and Acetic Acids, which distinguish
	Cobalt, Sulphate of	Blueish White, .	" of Copper, .	ORFILA.	Must be first neutralized by an Alkali.	Lead					it from Silver.
Acid, Arsenic	∠ Copper, Sulphate of	Blueish Green, Apple Green, Brick Red,	" of N	:::::	Must be neutralized.		Potassium, Iodide of	White 1-100,000 .	Iodide of L. Sulphate of L	THOMPSON	Useful in Analysis of Mineral Waters.
	Silver, Nitrate of	Brick Red, Purple,	" of S.		Requires some hours.	Lime	Potassa, Ferrocyanate of	White 1-4250	Ferrocyanate. Oxalate of L		Insoluble,
Acid, Boracic	Lead, Acetate of				Precipitate is soluble in Nitric Acid.	Magnesia	Soda, Phosphate of	White,	Phosph. Am. and Soda,	WOLLASTON.	Carbonate of Ammonia must be first added, and then the Phosphate of Soda.
	(Baryta water,						Acid, Hydrochloric	Yellow fumes,	Chlorine,		Apply a mild heat.
Acid, Carbonic	Lime water,	White	Carbonate of L		Precipitate is soluble in most acids with effervescence.	Manganese	Alkalies,	Yellow,	Sulphuret.		
Acia, Chromic	(Rigmuth Salts of	Lemon 3		Accom.			Acid. Hydrochloric	White	Protochloride.	Dur	
Acid, Gallic	Copper, " " Iron, Persalts of Lead, Salts of	Black,	Gallates of each			Mercury, Protoxide.	Acid, Hydrosulphuric	Black.	Proto-Sulphuret, Protoxide.	Praff.	
Julia, Gaine, 11111	Lime water	Brownish Green.				Mercury, Peroxide	Ammonia,	White.	Proto-Sulphuret,		
	Mercury, ""	Orange Yellow,			A pellicle of metallic platinum will soon float on the surface of		Albumen,	White	Protochloride	Sylvester	Upon a piece of Gold, as the back of a watch, place a drop of
Acid, Hydriodic	K				the fluid.			James day, 7		D. D	the solution, and the handle of a small steel key in the drop with the other end resting on the Gold also. If the solution
Acid Hydrothlosis	If Lead, Acetate of	White	Chloride of L		Starch must be cold. Precipitate is soluble in Dilute Nitric and Acetic Acids.						contain any Bi Chloride, an amalgam of Gold and reduced Mercury will be seen.
Tela, Hyaro morte	Silver, Nitrate of	White 1-108,000 .	Chloride of S		Precipitate is not redissolved by Nitric Acid.  Precipitate turns black on exposure to light.	Mercury, Bi Chloride	Lime water,				Mercury will be seen.
	Copper, Sulphate of	Milky 1-20,000 .		URE	Add first Potassa, and after the Sulphate of Copper add suffi- cient Muriatic Acid to dissolve the excess of Oxide of Copper.		Potassium, Iodide of	Brick Red, Scarlet,	Peroxide of M. Bin-Iodide of M		Carefully.
Acid, Hydrocyanic	Iron, Sulphate of		Ferro Prussiate Potassa,	URE	Add Potassa to throw down Protoxide of Iron, and after a few minutes, acidulate with Muriatic Acid.		Silver, Nitrate of	. White.	Protoxide of M		After some time the Mercury is reduced, and Bichloride of
	Mercury, Peroxide of		Bi-Cyanuret of M. Sulphuret of A		See Acid Arsenious.		Tin, Permuriate of				Tin formed.
Acid, Hydrosulphuric	Diamenth Coulds of	Black.	Sulphuret of B. Sulphuret of L.		WW 22V3W 333 OF HOUGH	Morphia	Acid, Nitric	Red 1-7000	Mudanta		y Must be heated together. Soluble in excess.
) ( Acid, Nitric	Silver, Nitrate of	Black.	Sulphuret of S.	015-	1.11		Alkalies,	Green, Blue,	Hydrate,		Soluble in excess.  Not precipitated by metallic Zinc like Copper, after acidulating with Sulphuric Acid.
Acid, Oxalic	Lime water and its Salts.	White.	Ovalate of L.		Acid must be heated. Precipitate is insoluble.	Nickel	Potassium, Iodide of	Yellowish Green, .	Iodide of N.		With Suiphuric Acids
)   111   11	Mercury, Protonitrate of		_		Precipitate is soluble in an excess of Phosphoric and Nitric Acids.	DI-ti-	Potassa, Ferrocyanate	Greyish White, .	Ferrocyanate. Hydrosulphuret,	BERZELIUS	Becomes brown if in excess.
Acid, Phosphoric	Silver, Nitrate of	White,	Phosphate of S		The acid must be first neutralized by Ammonia, and to distinguish it still farther from Arsenious Acid, add Hydrosulphu-	Platinum	Ammonia, Muriate of	Yellow,	Mur. Plat. and Am		Becomes a grey spongy mass. Alcoholic solution of C. A. must be used.
Acid, Sulphuric	Baryta, Muriate of	White,	Sulphate of B		ric Acid. Precipitate is insoluble.	Potassa	Acid, Perchloric	. White	Perchlorate. Bi-Tartrate,		Acid must be in excess.
Acid, Uric	Acid, Nitrie	Pink or Rose, White,	Tartrate of L	Accum.	Soluble in excess of Lime water.		Acid, Tartaric	Vellow.	Chlor. Plat. and Pot.	Tayroon	When combined with Ammonia.
Acid, Tartaric	Potassa, Salts of	White,	Tartrate of P.				Acid, Gallic	Davis Rroum	Gallate, Sulphuret.	Johnson	Blackens on exposure to light, and is soluble in Ammonia
Albumen	Gold, Muriate of		Protochloride of M	Bostock.	Same with Jelly Gelatin and Mucus.	Silver	Acid, Hydrochloric	White,	Chloride,		Lead the same, but then the precipitate is soluble in water
3	Brazil wood, Tinchire of	White. Purple.					Metals,				and Nitric Acid.  Most of them precipitate it in the metallic state.
Alkalies	Vegetable Blues	Brownish Red. Green.				Soda	. Acid, Sulphuric	TIPL:A.	Sulphate of S.		Decomposed by Baryta water.
	(Alkalies and Carbonates	Blue Restored.	Hydrata			Strontia	Alcoholic Solution	Pad di	Sulphate,		When fired.
Alumina	Cobalt, Nitrate of	Blue,	Hydrate.	GAHN	Pour a few drops of a solution of Nitrate of Cobalt and heat it;	Tin	Acid, Hydriodic	Dlast.	Iodide of T. Sulphuret.		San Cald
Ammonia	Acid, Hydrochloric Mercury, Bi-Chloride of	White fumes,	Muriate of A		Zircon has the same effect. Bring the two vapors in contact.		Gold, Muriate of	Purolo	Purple of Cassius, Hydrate.		See Gold.
,	I be a second	White,	Protoxide of M.	BRANDE	Add first a few drops of an alkaline solution.	Zinc	Ammonia, Hydrosulphate of Carbonates, fixed Aik	White,	Hydrosulphate.		
K		<u> </u>				L.			1	<u> </u>	1

KEY.

In this arrangement, the Chemical Agents (alphabetically arranged,) have their tests on the next column, in alphabetical order, and without reference to their delicacy, followed in the next column by the color of the precipitate and delicacy of test; in the fourth, by the composition and nature of the precipitate; in the fifth, containing the author, and in the last, the remarks necessary in their employment,—the whole arranged for the use of the Physician, Chemist or Apothecary, in a simple form, and embracing every information that the present advanced state of Science furnishes to the Chemist.



Sinisippini



# MARYLAND

# Medical and Surgical Iournal.

OCTOBER, 1841.

# BOYLSTON PRIZE ESSAY.

# CUTANEOUS AND MUCOUS EXHALATION.

BY ALBERT T. WHEELOCK, A.M. M.D. M.M.S.S. BELFAST, MAINE.

[Concluded.]

Part II. That a deficiency of the natural secretion from the surface, will be productive of disease, is evident, but the precise mode of its primary action on the system is more doubtful. There is an impossibility of ascertaining, before the symptoms are unequivocally present, what organ will be attacked. Besides the influence of remote causes in deranging particular organs or structures in preference to others, and thus laying the foundation of disease, there are other circumstances still more commonly concerned in proving the supervention of inflammation and inviting it to particular organs. The body is rarely found in so perfect a state of health that some of its tissues are not more or less debilitated and disturbed, and that part will be likely to suffer that has the greatest exposure or is in any way predisposed to disease from such a cause. The many influences that are continually operating

on the body, do not suffer the vital machine to go on for a long time without some, though often imperceptible derangement, in one or more of the complicated parts of its apparatus.\* If there is added to this the congenital debility of some structures and the constitutional weakness of others, the epidemic influences that may be present, the differences of age or sex, a sufficient number of causes is found varying in different individuals, and the same individuals at different times, to determine the attacks or particular parts.

For example, the usual mode of dressing children, with the whole of the neck, and upper part of the thorax bare, certainly increases the liability to colds in that region, and as a consequence of this may be the principal exciting cause of Croup, a disease that rarely occurs except in infancy, generally commencing gradually with a hoarse cough attended by slight difficulty of breathing; a roughness of voice, and slight languor, being the first indications of its approach. In this disease the skin is found in a hot and dry state, especially about the upper part of the body, and in the larynx, trachea and bronchia, there is an abundant secretion of thick viscid mucus, that is sometimes thrown out in large quantities, or remains in these passages producing symptoms of the most distressing suffocation. May not this secretion be the actual matter of perspiration, thrown on the internal parts, instead of passing out at the skin? This insensible perspiration in the healthy state is continually going on, and with a considerable degree of rapidity, as the experiment of bringing the mirror near the surface of the body shows. The mucus that is secreted in this disease, is probably mainly formed by it in its condensed state. The dry and hot state of the skin would favor this opinion. Also the fact that fat and robust children are more liable to the disease than others, for in such subjects the excretion from the skin is greater than in those less nourished. It is rare to meet with it in a child emaciated from the want of sufficient food, or from the effects of disease. The treatment

that has been found most effectual in the affection is blistering, stimulating frictions to the neck, diaphoretics, and emetics.

The blisters to the neck and the subjacent frictions produce a tendency to the surface, and appear to relieve the congestion of the parts affected in this disease. The diaphoretics are to restore the moisture to the surface: and if they produce their designed effect, and a copious diaphoresis is obtained, relief almost invariably follows. Emetics are given not only to remove the obstruction that often takes place in the throat, but also to equalize the circulation, produce a tendency to the surface, thus assisting the operation of the other remedies. The same treatment would be proper, if not the best, that could be devised, if the disease should be caused by a suppression of the cutaneous exhalation, and a consequent exudation of the same fluid into the lungs and bronchia. An examination after death in this disease, shows the air passages distended with mucus that seems to have exuded from their sides into these vessels, and to have been the immediate cause of its fatal termination. The larynx, and trachea, are lined with a false membrane, that appears to be merely a layer of hardened mucus, and it is a striking fact that if a copious diaphoresis is procured, the membrane peels off and is easily discharged from the throat, as though it was kept adherent and increasing in thickness by the continual additions of this mucus, and immediately separated from the sides of the larynx as soon as this secretion was arrested, as though it left the internal parts of the neck and thorax, as a passage was open for it to escape through its natural emunctory, the skin. A fact of some importance in connexion is, that the secretion of mucus in the air passages is the most abundant, when the fever and the heat and dryness of the skin is greatest.

Dysentery is another of the diseases that is attended with a disordered state of the cutaneous functions. It is most generally prevalent during the latter part of summer and autumn, when the alternations of temperature are sudden, and especially when there is considerable difference between the heat of the day and night, but there is no season of the year in which it is not found occasionally to make its attacks, provided the body be exposed to the

cause most favorable to its production, cold or chill after comparative warmth. It is much more prevalent in warm latitudes, than in temperate climates, probably from the circumstance that in the former situations, the heat of the day is followed by greater comparative cold at night, the chilling effect of which is aided by the heavy dews that are so general in the warm regions of the earth.\* The operation of this cause is illustrated by the case of soldiers, who are frequently attacked in numbers after a night encampment or bivouac, on damp ground. It is generally commenced by chills, followed by mucous discharges from the bowels, sometimes in the beginning of the attack, the discharges are feculent and liquid, they may subsequently become mucous, and mixed with blood. In the severer form of the disease occasionally a well marked rigor, followed by febrile heat, introduces it; in other cases, the first symptom is pain in the bowels, to which the mucous stools characteristic of dysentery, in a short time succeed; the extremities are cold, the pulse small, great prostration of strength, and the urine scanty, high colored, often passed with pain. According to some clear descriptions of the disease, as occurring in hot climates, by some who have had the opportunity of observing it, it preserves there its distinctive marks. patient is at first languid and loses his hilarity of mind, sometimes he complains of pain in the region of the liver, increased by pressure, and often relieved by the expulsion of the flatus from the stomach, but the pain is not great, and much less than would be expected from the state of the liver after death. The true character of the disease is denoted by this symptom, but in some cases this is entirely wanting, hence the greater obscurity. many cases, at this stage, the most acute observer will discover no sign of bad health, but a white tongue and a pulse more frequent than usual. Matters remain in this state during a period varying from four to eight days, and the inexperienced person apprehends little danger, but an insidious fever imperceptibly depresses the patient, till the actual symptoms of dysentery display themselves with great violence. The fever is increased, there is high deli-

rium, urgent thirst, while the tongue is coated with a yellow fur, which is converted towards the close of the disease into a permanent dark crust, a large quantity of bilious and sanguineous matter flows from the bowels. There is not much pain in the abdomen in this stage of the disease, but the tenesmus is most distressing, and occasionally protrudes a portion of the rectum. Subsultus tendinum, hiccups, and cold sweats take place, and unless relief is afforded before the disease reaches this stage, death speedily ensues.\* Its termination is sometimes in chronic dysentery. The fever subsides, and there is a partial and temporary recovery; but the symptoms may recur, from any imprudence in diet or regimen. The stools are then mucous and bloody, and sometimes mixed with purulent matter; or such evacuations alternate with discharges of sanies, or of offensive ill digested fæces, the number of dejections varying from three or four, to seven or eight in a day. The abdomen is hard, without being painful on pressure, the urine is high colored, and voided with difficulty; the pulse is feeble, and generally slow; the skin is cold, dry, sallow, and rough; the lips appear bloodless; the feet and legs become cedematous; ascites occasionally takes place, and finally after a few weeks, sometimes months, the patient sinks from irritation or exhaustion. On post mortem inspection, there are appearances of inflammation in various portions of the intestines; parts are found of a bright red color and slightly elevated above the parts around them, these portions are sometimes covered with a puriform, sanious or sanguineous secretion, giving them the appearance of ulceration, and in subjects that have died of chronic dysentery, real ulceration is discovered, false membrane is often seen deposited on the mucous coat; this is most frequently found in the colon and rectum, although sometimes in the small intestines. The skin in this disease is generally of a dingy color, and has lost its natural elasticity and moisture, so that there is evidently a torpor of the cutaneous exhalents. insensible perspiration is stopped, the amount of matter carried off in this way continually, in a state of health, is retained within

the body. A part of this matter probably helps to form the mucus that is discharged by the intestines, the functions of the skin are thus very imperfectly performed, and hence arises the disturbances of febrile symptoms, heat, nausea, and gastric distress. These retained matters are of a most poisonous and irritating character, producing inflammation of the mucous coat of the intestines, followed by extensive ulcerations. The liver, which is known to sympathize so readily with the skin, is almost always easily affected in attacks of this kind, manifesting the usual disturbances of action that follow from a diseased condition of the external capillary system, whatever may be the causes.

If this view of the disease be correct, what is the indication for its treatment? It is, mainly, to restore the action of the cutaneous exhalents, at the same time evacuating the irritating contents of the bowels. This is the effect of the means that have generally been found most efficacious in its cure. The remedies usually employed are mild purgatives, fomentations and sinapisms to the abdomen, diaphoretics, emetics, and occasionally general and local bloodletting. We cannot rely upon general bleeding as the only mode of depletion in this disease, as experience has shown that the mucous membranes of the intestines are less readily affected by this, than most other parts of the body, and it should be therefore followed in some cases by cupping and leeching. The repetition of this part of the treatment may be left to depend on the strength of the patient, the continuance of the griping pains, the degree of relief that is afforded by it, and if circumstances admit, it may be followed for several days according to the state of the patient. It assists the operation of fomentations, and diaphoretics, which will always be found more serviceable after the bleeding. Formerly purgations were considered the most important part of the treatment, from the erroneous opinion, that the disease was caused altogether by the lodgement of unhealthy matters in the intestines; at present mild purgatives only are employed, from the belief that the irritation of the harsher purgatives is greater, than that caused by the presence of the unhealthy secretions in them. They should be administered with some caution, and if the discharges are free

and copious, are rarely needed. The principal reliance in ordinary cases of dysentery is upon the proper use of diaphoretics, and those of a stimulant kind, given after the bleedings, are probably better than any others. There is generally little danger of a too free use of warming medicines of various kinds. Free and copious diaphoresis, following the use of these means, is generally attended with immediate benefit. A knowledge of these facts, will at once regulate the treatment of the disease in its chronic variety, demonstrating the injurious tendency of the purging system too frequently resorted to, as well as the importance of avoiding the use either of medicine or food, that unnecessarily stimulates the already excited mucous membranes. The state of the alimentary canal and its liability to inflammation, should therefore be constantly kept in view in the treatment. Our best preservative and curative measures in ordinary cases, consist in warm clothing, frictions on the abdomen, the part being subsequently swathed with flannel, mild temperature, great attention to the skin, bland nutritious food, the employment of only mild purgatives when necessary, and local bloodletting when symptoms of inflammation are present. To these means we may add, mucilaginous drinks, Dovers powders, and in some cases slightly astringent drinks, as lime-water and milk, or some vegetable infusion.\* Even when ulceration of the mucous coat of the intestines has taken place, the cure need not be despaired of, although a very intractable malady in this stage. Examinations of patients with this condition, who have died of acute diseases, have shown old ulcers of this kind, in some places evidently healed, in others the process of reparation going on. Many remedies have been proposed for this modification of the complaint, and although the main indications for the cure might remain the same, some more local, and direct applications, are supposed to have been beneficial, as some of the mineral astringents and caustics with opiates. When the natural color and softness of the skin returns, and the discharges become less mingled with unhealthy matters, and appear like the natural evacuations, the severest part of the disease seems to be over. The mucous intestinal canal is very irritable in this diseased stage, and the least imprudence in dress or diet, any exposure without proper protection to a damp and cold night air, will instantly manifest itself in a return of the symptoms. The disordered action becomes regularly unnatural, a chronic inflammatory condition is commenced on the internal membranes, that is exceedingly difficult to be subdued, and probably in no case would be overcome by the unassisted powers of nature, with no more than ordinary attention to regimen.

In asthma there is also an appearance of derangement of both the cutaneous and mucous surfaces. The disease is produced by malformations, diseases of the lungs, adhesions of the pulmonary pleura to the pleura of the side, exposure to cold, and other The disease may be considered chronic, as it seldom fails of making its appearance more or less constantly and repeatedly, after the first attacks. It is attended with an habitual and constant dryness and constriction of the skin, with a sense of oppression and stricture about the thorax. The cutaneous exhalents are not entirely torpid, but seem to have lost their natural vitality. Asthmatic individuals are exceedingly liable to gastric disorders, and the disease is sometimes combined with chronic diarrhœa, they breathe easier in a pure unconfined air, and bear a dry and warm, better than a humid atmosphere, they require large rooms; their troubles seeming to be greatly aggravated by confinement in small and tight apartments, they often complain of wanting a more full respiration than they have, and although to appearance the lungs are fully dilated, they think they do not take in enough air. The paroxysms come on generally at night during sleep; there are often premonitory symptoms, as languor, heaviness over the eyes, and headache, uneasiness about the region of the heart, pain in the neck or a drowsy stupor. The patient is seized with great anxiety and difficulty of breathing, a sense of stricture across the thorax, with a short dry cough. The breathing becomes very laborious and suffocative; the countenance expresses great distress, and the heart often palpitates violently, the patient desires free and fresh air, and insists on the

doors and windows being thrown open; the extremities are cool, the pulse irregular, intermitting and accelerated. After these symptoms have continued for a time the breathing becomes gradually less laborious, and a copious expectoration ensues, and this is always followed by a temporary relief. There is evidently an effusion of mucus into the air passages, presenting an obstacle not only to inspiration, but to expiration, the lungs are kept in excessive dilatation, and the respiratory muscles are at the same time excited to convulsive action. The stethoscope detects a clicking sound like that of the opening and shutting of small valves, occasioned no doubt by the continual displacement of the mucus masses in the lungs. There is a variety of râles in different parts of the chest, and these change their places and characters at the different periods of the paroxysms; the usual sound of the lungs of an asthmatic person in the intervals of the severer parts of the disease, has been compared to the singing of distant birds. Sometimes but one fit occurs at the time, the patient is relieved, but the lungs may continue irritable during the day, and it may recur during the night; the attack may continue for several days with occasional remissions. From the susceptibility of the lungs to irritation, from particles of dust, smoke, or moisture in the air, there is probably inflammation of the air passages: dilatation of the bronchia often takes place, emphysema, hæmoptysis, disease of the heart of various kinds, also effusions into the pleura. When death occurs it is generally from some of these causes, although sometimes happening instantly from obstruction of the air vessels by spasm. From the inspection after death it would appear, although the chest was more dilated than usual during respiration, and the descent of the diaphragm augmented, that the lungs being more or less filled with mucus, the proper amount of air is prevented from entering them, and also the requisite changes in it from being effected. The symptoms of the disease, the early occurrence of the expectoration generally, the spasms and distress attending it, the congested state of the bronchial mucous membranes, when death has taken place in the early stage of the attack, would favor the idea that the disease

may be caused by the internal congestion produced by an imperfect action of the capillary system.

The disease is almost always incurable. All that can be done by medicine is to mitigate the severity of the symptoms, and procure temporary relief. That treatment has been found most useful, that will most effectually overcome the torpor of the exhalents, and bring back a healthy condition of their functions. A mild and spare diet, warm clothing, or residence in a warm dry climate, are found to effect much for its relief; a long continued use of the flesh brush, narcotics, alkalies and also warm bathing are beneficial. Bloodletting during the paroxysms has been attended with good effects; may not the relief that follows bloodletting in this disease be partly occasioned by the consequent decrease of the internal exudation from this fluid. Nauseating doses of the emetics, and full emesis, are almost invariably followed by some benefit. Of the emetics, this is one of the few cases in which the Lobelia has been found the best, and it commonly excites a more full diaphoresis than any other. Given in the saturated tincture a table spoonful every fifteen minutes, it acts very rapidly, entirely removing the difficulty and oppression of breathing, and actively promoting the expectoration.

From such statements, it would seem, that there exists a very important connexion between the functions of the internal and external surfaces of the human body, so intimate that an inordinate excitement of the vascular system of one, is attended by a diminished action of that of the other. Although the anatomist demonstrates no vessels leading directly from the internal mucous membranes to the surface, yet when we consider that the transpiration is gazeous in its uncondensed state, we may plainly suppose an anatomical conformation adapted to it. The external orifices for the perspiration are not even visible by the microscope, and yet an abundance of solid animal and watery matter is thrown out. There is reason to believe that the vessels conduct very readily from the mucous, to the cutaneous surface. The relation between these surfaces is more evident in their abnormal state. Diseases of the bronchia, and alimentary canal, are generally attended with high inflammation, or increased secretion, and the skin is dry and harsh. Affording evidence of an immediate and direct mutual connexion between them,—and that serious diseases are produced by a disturbed action of this transpiratory apparatus. Hence the healthy excitement of the exhalents by diaphoretics, and other means of a similar tendency, contribute greatly to the removal of such affections.

## MEMOIR OF SIR ASTLEY COOPER.

HIS LIFE, CHARACTER, AND WRITINGS.\*

SIR ASTLEY COOPER was the fourth son of the Rev. Dr. Samuel Cooper, of Yarmouth, in the county of Norfolk. mother was the daughter of Mr. James Bransby, of Shottisham, a co-heiress descended from the family of Paston, Earls of Yarmouth, a lady distinguished by high intellectual attainments, and known as the author of a work of fiction called "The Exemplary Mother." Astley Cooper was born at Brooke, in Norfolk, on the 23d of August, 1768, where he remained till the age of fourteen, receiving his rudimental education at the village school, and the higher branches of learning from his father and the Rev. Joseph Harrison, a distinguished classic. His mind was early directed to the study of surgery, and he was, when about fifteen years of age, placed with Mr. Turner, who was at that time a general practitioner at Yarmouth. Here he only remained a few months, when he came to London, and was apprenticed to Mr. William Cooper, his uncle, then one of the surgeons to Guy's Hospital. Shortly afterwards, at his own desire, he was transferred to Mr. Cline, at St. Thomas's Hospital. The early part of his pupilage was not marked by that unremitting industry which afterwards distinguished him; and it was not until after he had spent a short time in Edinburgh in 1787, and had been appointed demonstrator of anatomy at St. Thomas's Hospital, under Mr. Cline, that his great natural powers were called forth, and matured by the utmost industry in the dissecting-room and the wards of the hospital. In 1791 he began to give a portion of the anatomical course in conjunction with Mr. Cline. time no distinct courses of lectures on the principles and practice of surgery were given in London, the maxims of the day being included in the anatomical course; but Mr. Cooper, with the concurrence of the surgeons of Guy's and St. Thomas's, com-

<sup>\*</sup> From No. 22 of the Provincial Medical and Surgical Journal.

menced the lectures, since so well known by the publication of repeated editions, and which very soon became the most popular of the day. Towards the close of 1791 he married Miss Cock, of Tottenham, a relative of Mr. Cline. In 1792 he went to Paris, and attended the practice and lectures of Dessault and Chopart. He commenced practice in the same year, residing for six years in Jeffrey's Square, St. Mary's Axe. He then removed to New Broad street, where he remained until the year 1815, when he removed to the Westend, having been surgeon to Guy's Hospital since 1800. He lived in the house now occupied by Bransby Cooper, 2 New street, Spring Gardens, and enjoyed an immense practice until 1827, when he retired into the country; but it soon appeared that he was not formed for a life of "inglorious ease," and he shortly afterwards returned to London, and resided until his death in Conduit street. Here he gave a series of professional soirées, which were attended by most of the practitioners in London; but he never regained a tithe of the practice he had formerly had. He was appointed surgeon to George IV., and in 1821 was created a baronet, with remainder, in default of male issue, to Astley Paston, the fourth son of his second brother, the Rev. Dr. Samuel Cooper, rector of Ingoldsthorpe and Barton, Norfolk. He continued his lectures at Guy's Hospital until 1826, in which year he became president of the College of Surgeons; and in 1827 he was appointed serjeantsurgeon to George IV. Lady Cooper died in the same year, and in 1828 Sir Astley married the daughter of Mr. Jones, of Derry Ormond, Cardiganshire. He was again elected president of the College of Surgeons in 1837, continuing his practice and pathological labors until his last illness. With the exception of occasional attacks of gout and vertigo, he invariably enjoyed good health, until about six weeks since, when he was walking to church at Strathfieldsaye with his Grace the Duke of Wellington, and was seized with violent and irregular action of the heart, accompanied by considerable difficulty of breathing. He returned to town, and immediately put himself under the care of Dr. Bright and Mr. Bransby Cooper, when it became evident that effusion to some extent had taken place into the pericardium. He was

occasionally delirious, and though not suffering acutely, was troubled by frequent cough and dyspnæa. Effusion now came on in the left pleura, and Dr. Chambers was consulted, when elaterium was given in tolerably free doses; but he was beyond the power of medicine, and died without a struggle about one o'clock on Friday, February 12th, in the seventy-third year of his age. A post-mortem examination was made of the body, when it appeared that the heart was enlarged, and its walls diminished in thickness. There was serous effusion in the pericardial and pleural cavities, and several patches of atheromatous deposits upon or between the coats of the aorta. His title, with the bulk of his landed property, descends to the present baronet, a younger brother of Mr. Bransby Cooper, who has a large family. His extensive and valuable museum, with his various works, pass to Mr. Bransby Cooper.

Besides the baronetcy, the late Sir ASTLEY possessed several other marks of distinction. Louis Philippe conferred on him the cross of the legion of honor; he was elected corresponding member of the National Institute of France, and of most of the learned societies of Germany and America; and from William IV. he received the distinction of grand cross of the royal Guelphic order. He was also a doctor of civil law of the University of Oxford. His professional income was probably greater than that of any other surgeon or physician of our own or former days, in one year exceeding £21,000, and for several years averaging £15,000. He has more than once received £1000 for a single operation, and has been confidentially employed by their late majesties George IV. and William IV., his Royal Highness the Duke of York, and all the leading aristocracy of the country, in addition to numerous eminent individuals from every quarter of the globe,

" \_\_\_\_\_ Sidera terræ

Ut distant, ut flamma mari, cic utile recto,"

says Lucan; but it is only necessary to refer to the character of Sir Astley Cooper to prove the fallacy of this celebrated aphorism. His success, though of course dependent in some degree on the fortunate circumstances which surrounded the commence-

ment of his professional career, was otherwise entirely dependent on his own merits and exertions. He was never guilty of open intrigue or secret inuendo against the character of a professional brother, never attempting to build his own reputation on the ruins of that of another. He was always ready to afford his advice and assistance to the junior members of the profession, hundreds of whom now living cherish his name with affectionate veneration. As a public lecturer he was probably the most popular that ever appeared in an English school; an enthusiast in his profession, and eloquent in its praise, he poured forth the treasures of his clear understanding with an energy, frankness, and affability, that, combined with his liberal feelings and engaging countenance, completely fascinated his auditors. His class for some years exceeded four hundred in number; and we never yet saw a man who had heard him who was not loud in his praise, and grateful for his instructions. As an hospital-surgeon he was distinguished for the amenity of his deportment, his ready tact in the discrimination of disease, and the no less subtle ingenuity in forming plans for its cure. As an operator, though never particularly neat, he was always expert, rapid, and unusually successful. His industry is probably without a parallel in the history of the art. He was always a very early riser; and even at the time when he was employed from six in the morning till midnight in attendance on his public and private patients, with the duties of his lectureship, he would spend great part of many nights in anatomical and pathological pursuits, as is proved by the statements of his friends, and the fact that his most laborious works appeared while he was in the zenith of his popularity. Even when past the usual age of mental activity, when he had reaped the "otium cum dignitate," so far from luxuriating in the ease of mental repose, he composed his last work on the Anatomy of the Breast, which is founded on upwards of two hundred and fifty preparations in his private museum. During the period he was constantly employed, he maintained the habit of noting down all interesting occurrences in his case-book, which are preserved from 1794 to the latest days, affording the most valuable materials for the illustration of surgical precepts.

WE introduce here in connection with the personal appearance and manners of Sir Astley, a very graphic account of Professor Gibson's visit to the great English Surgeon.\*

"It was natural I should wish to see the Wellington of British Surgery, as Sir Astley Cooper has been emphatically styled. I had attended his lectures, occasionally, and witnessed his operations, in Guy's and St. Thomas's hospitals, thirty years before; I was familiar with his writings and high reputation at home, abroad, and, indeed, throughout the civilized world, and felt no ordinary desire to form the acquaintance of one who, in addition to the highest professional renown, was allowed, by common consent, to be among the most finished gentlemen of the day; I repaired, therefore, to his house, without any introduction whatever, was ushered into his presence, and received with a courtesy and urbanity I was totally unprepared to expect; for, upon my name being announced by the attendant, he came forward with ease and alacrity, and expressed, in the kindest possible way, his pleasure at meeting one connected with a university he had long known by reputation, and with some of whose professors he had been upon the most intimate terms of friendship, whilst fellow-pupils with them, under the celebrated Hunter. Imagine a tall, elegantly formed man, moderately robust; with a remarkably pleasing and striking countenance, red, and fresh as a rose, apparently about fifty-eight or sixty years of age, but, in reality, above seventy, very agile and graceful in all his movements, simply, but handsomely attired, with the spirit and vivacity, and bearing of a youth, with, in short, no marks of advanced age, except a head as white as the driven snow, and a very just conception may be formed of the appearance of Sir Astley Cooper.

"I had scarcely been seated five minutes before I found myself deeply engaged in discussing all the knotty points of surgery,

<sup>\*</sup> Rambles in Europe in 1839, with Sketches of prominent Surgeons, Physicians, Medical Schools, Hospitals, Literary Personages, Scenery, etc. By William Gibson, M.D. Professor of Surgery in the University of Pennsylvania, senior Surgeon to the Philadelphia Hospital, member of the American Philosophical Society, of the British Provincial Medical and Surgical Association, etc. etc.

question following question, in rapid succession, and the greatest interest evinced in the various answers returned—all touching points of practice, either peculiar to America, or in conformity with English or French doctrines, or notions, or, as sometimes happened, adverse to both. Thus employed, an hour glided quickly away, when a servant entered and whispered, audibly, that the rooms were full of patients, all anxious to obtain his advice. He rose suddenly, apologized for leaving me, and said, "Come and breakfast with me to-morrow precisely at nine, and any morning, if you please, at the same hour, as long as you remain in London, and I will go through with you, day after day, the various preparations in my museum, the most valuable and choice of which are contained in my house." The next morning I was at my post by the appointed time, breakfast was served precisely to the minute, and half an hour afterwards I found myself in his museum listening to a lecture on the structure and functions of the thymus gland, illustrated by some of the most beautiful preparations I ever beheld. At half past ten I took leave, and Sir Astley said at parting, "Come to me if you can, to-morrow at two o'clock, and I will take you to Guy's Hospital, show you the establishment and its large and splendid collection of preparations-many of which occurred in my own practice, and are very interesting and unique in their character." Whilst riding, upon that occasion, for miles along the crowded streets of London, and moving so slowly as scarcely to reach our destination for an hour and a half, I was forcibly struck with the fund of anecdote which he was constantly pouring forth, chiefly illustrative of the scenes of his long and eventful life, and relating, in many instances, to ludicrous, or remarkable, circumstances in the history of some of his professional brethren—all told in such a way, as to convince me that he possessed an innate love for fun, or mischief, so refined, however, by benevolence, as never to wound, or tarnish, the characters of those whose peculiarities, or infirmities, he portrayed. I was the more persuaded of this ingredient in his composition, afterwards, from hearing, through an old friend of his in the neighborhood of Yarmouth, where he was born, the following anecdote—upon the truth of which I thought I could rely. "Sir Astley," said he, "was the son of a clergyman of Yarmouth, where, upon one occasion, the church bells began to ring, so vehemently, as to alarm the inhabitants, who ran in great numbers to the parsonage to inquire of the minister the cause of such terrific peals from the steeple. 'Oh!' said the reverend gentleman, 'I have no doubt it's all the work of that mischievous wag of mine—Master Astley—and his hopeful playmate, Tom Goodfellow.' Accordingly, upon ascending the steeple, it was found, as predicted, that the boys were busily at work, full swing, pulling and hauling the rope in fine style, and amazingly delighted at the stir and sensation they were creating throughout the town, and the trouble they were giving to the honest citizens."

During the ride Sir Astley mentioned to me, also, a striking peculiarity—which showed the power and extent of his memory, by remarking he could take up any of the poets, and from two or three readings repeat for years afterwards, whole passages without the slightest omission or mistake, and, in proof of it, immediately recited several pages from Young's Night Thoughts. In conversing with him concerning the destruction of Hunter's papers, by Sir Everard Home, he remarked it was true, and an act of great folly on Sir Everard's part, inasmuch as it led to the belief he had never produced an original work, but had stolen every thing from Hunter; whereas, he had strong reason to believe, Sir Everard had only burnt papers which he conceived to be of little or no importance, and that he was not, justly, chargeable, in a single instance, with plagiarism. He also spoke of Home, as having been an excellent surgeon, full of information, devoted to his profession, but rough in his manners and operations, and so decided in character, and independent in views, as to give, upon many occasions, great offence to his patients and brethren.

Upon reaching Guy's Hospital, I had soon proof of the activity of Sir Astley's frame, and the vigor of his constitution; for he walked with the quickness of a young man, and was so rapid in his movements, as to render it difficult to keep pace with him. I was particularly struck with his demeanor towards the house

surgeons, the pupils, the patients, the superannuated nurses, and every living thing about the establishment, his manner being as kind and conciliatory as possible, taking, in several instances, the old men and women aside, and inquiring into their wants, and, upon one occasion, going considerably out of his way, and up a long flight of stairs, expressly to shake hands with an old woman, who had been one of his principal nurses more than forty years, and the only surviving individual, he said, who had been connected with the hospital as long as himself.

After showing several interesting cases in the wards—one, an amputation at the shoulder-joint, performed by Mr. Key, and in a fair way of recovery, the stump being nearly healed, and beautifully formed—he led the way to the surgical cabinet, and pointed out, with his own hand, each interesting specimen, giving its history and peculiarity, and waiting, patiently, until I had secured his remarks in my note-book. There, and afterwards at St. Thomas', I had the opportunity of examining all the preparations referred to in his great work on Hernia, the specimens in which the aorta, the iliacs, the subclavian and carotid arteries had been tied by himself, and the causes of failure, or success, amply demonstrated. There, also, I saw a specimen in which the subclavian had been tied, successfully, by Mr. Key, in a case where the axillary artery had been torn, in an attempt to restore a long-standing dislocation of the shoulder, and the result of which proved that I myself had been justified in pursuing the same course, under similar circumstances, long before. From the museum, (the extent and beauty of which can only be appreciated by those who have examined it, closely, as I had frequently, afterwards, opportunity of doing, and of comparing each specimen with the printed catalogue, in shape of a large volume, prepared by the intelligent Dr. Hodgkin,) Sir Astley kindly took me to the College of Surgeons, where we listened to a most eloquent discourse on the comparative anatomy of the kidney, in various animals, by the celebrated Mr. Owen; afterwards introduced me to all the prominent surgeons and physicians present, and concluded by ushering me into the great Hunterian Museum, giving me free and unlimited access to every department of it, and there leaving me to revel in the regions of anatomical, surgical, and scientific research, to my heart's content. From that period I became a constant visitor at Sir ASTLEY's, and, through him, formed the acquaintance of Sir Benjamin Brodie, and most of the other distinguished surgeons of London.

There are many, even in London, who believe Sir ASTLEY to have retired from the profession, into the walks of private life. This is a great mistake; for although he has ceased, for some years, to perform the duties of a lecturer, and to attend at Guy's Hospital, except as consulting surgeon, he is still engaged in business and the examination of numerous cases at his own house. It is true he purchased, some years ago, a splendid seat near London, and intended to retire from the profession. For a time he was delighted with his agricultural occupations, but, at last, found himself so pursued into his retreat by his old patients, or so watched and called upon, whenever he ventured to show himself in town, that he was obliged, in spite of himself, to resume his former pursuits, and has ever since attended, regularly, to the profession. Another circumstance is said to have contributed to drive him from the country. As long, said my informant, as Sir ASTLEY could find a case of disease in his horses, cows, sheep or pigs, he was delighted and attended them with all the interest and fidelity he would have shown to a human being, often trepanned the head of some favourite ram, or ewe, in search of the cause of its disease, but the moment he found his stock in perfect condition, he at once became unhappy and sighed for his town-house and the wards of Guy's Hospital."

Let us now turn to the character of Sir ASTLEY as a scientific man, and consider for a moment the discoveries which have alike established his own fame, advanced the science he professed, and increased the resources of the working surgeon in the daily exercise of his art. The mere enumeration of these is all that is necessary to place the name of Sir ASTLEY high among the most renowned benefactors of humanity, and to afford on the slightest knowledge of the comparative state of surgery fifty years ago and at the present day, the most startling conviction of the immense influence which may be exerted over a class or a nation

by the labors and talents of a single individual. It is not half a century since it was doubted in our schools whether the hip-joint was ever dislocated; and those who admitted the possibility of the occurrence, doubted the practicability of its reduction. Cases were constantly met with in the hospitals where dislocations had been treated as fractures until the period had passed in which reduction could be effected; and others, perhaps equally numerous, in which irreparable injury had been inflicted by pulling a fractured limb, under the belief that it was dislocated. Sir ASTLEY cleared up this cloud of ignorance and error; and now, as a result of his researches, almost every fracture and dislocation is readily recognized by the merest tyro, and their treatment rendered more simple and efficacious.

We turn to hernia, and trace similar improvements to the same source. The various species of hernia have been distinguished from each other, and from the different diseases with which they had been, or might be, confounded. The anatomy of the parts through which the intestine might protrude, and its various coverings after protrusion, were carefully investigated, with the effect of rendering our knowledge of the descent far more precise, increasing our means of preventing strangulation, and making the operation after strangulation had occurred far more safe and effectual.

The experiments of Sir Astley on the ligature of arteries, and the collateral circulation subsequently set up, followed by his bold, but strictly warrantable, operations on the carotid and aorta, had an equally remarkable effect on the surgical therapeutics of aneurism. He was the first to demonstrate the practicability and safety of tying the carotid in the living subject; and it is fair to conclude that this operation has been the means not only of curing diseases otherwise fatal, but that it has led to a far more philosophical view of the treatment of aneurism than was received in the time of Hunter. He was the first to tie the aorta; and subsequent facts have shown that this will, in all probability, confer on the surgeon the power of directly saving life in some cases.

The work of Sir Astley on the Anatomy and Diseases of the

Testis affords another example of the effect of his labors in advancing surgical science; various diseases being distinguished from malignant growths and depositions, and made readily curable, for which the sufferers were formerly doomed to castration. Indeed, there is scarcely a department of surgery, the practice of which has not been vastly improved by his unwearied industry and practical tact. He was the first to remedy obstruction in the Eustachian tube by puncturing the membrana tympani; the first to let off the fluid of spina bifida by repeated puncture, and thereby cure a disease previously considered beyond the reach of art. He was the first who cut into the membranous portion of the urethra through the perinæum, rather than puncture the bladder, either above the pubes or through the rectum; the first who practised the removal of exostoses by paring off their investing periosteum, thereby removing the medium of their nutrition, causing their death, and exfoliation. His latest work, on the Anatomy of the Breast, is one which will always be the standard authority on the subject, and is only equalled by his volume on the Non-malignant Diseases of the Breast, a work which is distinguished for the diagnosis it contains of the simple from the malignant diseases, and the sound precepts laid down as to the tumours which might be removed without a fear of their return,—points of the first interest to the practical man.

We have purposely abstained from filling our pages with the various anecdotes which have been going the round of the daily and weekly periodicals, knowing many of them to be apocryphal and others decidedly false, and have now merely to add a list of the different contributions for which the profession is indebted to Sir Astley, all of which we hope to see published in a collected form with the life of their author, under the able editorship of his nephew. In answer to some illiberal attacks in the "Chronicle," ascribing avarice to Sir Astley, we have only to state that, in addition to his well known generosity during life, he has freely endowed a perpetual studentship, to be in the gift of the College of Surgeons, as a lasting memento of his devotion to the science he professed.

For the following list of the various published writings of Sir

ASTLEY COOPER we are chiefly indebted to the memoir which appeared in Mr. Pettigrew's "Medical Portrait Gallery."

1798. Two papers in the "Medical Researches;" one on a case of diaphragmatic hernia; the other detailing three instances of obstruction to the thoracic duct, and showing, by dissection, the channels through which nutrition was carried on.

1800. A paper in the "Philosophical Transactions," entitled, "Observations on the Effects which take place from the Destruction of the Membrana Tympani of the Ear."

1801. In the "Philosophical Transactions," an "Account of an Operation for the Removal of a particular species of Deafness." For this paper he obtained the Copley medal of the Royal Society.

1804. His work on hernia appeared, entitled, "The Anatomy and Surgical Treatment of Inguinal and Congenital Hernia." A second edition was brought out in 1827.

1805. In the Edinburgh Medical and Surgical Journal we find a "Case of Malformation of the Genito-urinary Organs."

In the Transactions of the Medico-Chirurgical Society, we find—

1809. Vol. I. Two cases in which the carotid artery was tied, once successfully.

1812. Vol. II. "Dissection of a Limb on which the Operation for Popliteal Aneurism had been performed." Also, "Some Observations on Spina Bifida."

1813. Vol. IV. "History of a Case of Premature Puberty," and "An Account of the Anastomoses of the Arteries of the Groin."

1815. Vol. VIII. "Three Cases of Calculi removed from the Bladder without the use of cutting Instruments." This paper was written to show the extreme dilatibility of the female urethra.

1817. Vol. XI. "Account of a Case in which numerous Calculi were extracted from the Urinary Bladder of the Male without the employment of cutting Instruments."

1818. Vol. XII. Contains the history of a case in which a fatty tumour, weighing upwards of thirty-seven pounds, and measuring eighteen inches around its neck, was removed from the walls of the abdomen, the patient completely recovering.

1818—20. The surgical essays of Sir Astley and Mr. Travers appeared, those of the former being—1. On Dislocations. 2. The well known Case of Ligature of the Aorta. 3. On Exostoses. 4. On Dislocations and Fracture of the Hip and Kneejoint. 5. On unnatural Apertures in the Urethra. 6. On Encysted Tumours. We have alluded to all these with the exception of the last, which is written to prove that encysted tumours take their origin in obstruction and enlargement of the sebaceous follicles.

1822. His great work appeared, "A Treatise on Dislocations and Fractures of the Joints;" and in

1823. An Appendix was added, on fractures of the neck of the thigh-bone, in consequence of the strictures of Mr. Earle.

1829. We have "Illustrations of the Diseases of the Breast. Part I." And in

1830. "Observations on the Structure and Diseases of the Testis."

1832. "The Anatomy of the Thymus Gland."

1836. In the first number of the Guy's Hospital Reports there are papers on the anastomoses of the femoral and inguinal vessels, and an account of the post-mortem examination in 1821 of the patient whose carotid artery he had tied in 1808. In the subsequent numbers we have a minute dissection of an unusually formed placenta and imperfect fœtus, and some observations on the thyroid gland contained in a paper by Mr. King. Also, "Some Experiments and Observations on Tying the Carotid and Vertebral Arteries, and the Pneumogastric, Phrenic, and Sympathetic Nerves." "On Spermatocele, or Varicocele of the Spermatic Cord." "On Dislocation of the Os Humeri upon the Dorsum Scapulæ, and upon Fractures near the Shoulder-joint." And the last paper he ever published, which was in the number for October, 1840, the "Dissection of a supposed Hermaphrodite."

His work "On the Anatomy of the Breast," appeared in 1839. His "Lectures on the Theory and Practice of Surgery" have gone through various editions. The only authorised edition is that of Mr. Tyrrell, of which only three volumes have appeared, in 1824, 1825, and 1827.

Sir ASTLEY was engaged until his death in the completion of other publications and the correction of his older ones; and we understand that most of his papers are in a state which will render their arrangement far from difficult; and it is to be hoped that the public will shortly be favored with the completion of his work on the Breast, which will comprise the various malignant diseases of this organ.

Vol. II.-No. 2.

4

### SETON AND TENTS

0F

### SLIPPERY ELM BARK,

IN RECENT COMPOUND FRACTURE OF THE TIBIA.

On the 25th of May, 1840, WILLIAM LEMMON, in the employ of the "Rail Road Company," had both legs severely fractured by the burthen cars running off the track between this place and Monocacy bridge. His legs were caught between the locomotive and the tender, and he was thrown entirely over the engine, from whence he was brought to town. The right leg was so severely crushed, and the main vessels were so much injured, as to require immediate amputation—in which I was assisted by Dr. Ritchie and Mr. B. E. Hughes, one of my students, and Dr. Wm. B. Tyler joined us while under way. The left leg was not so seriously injured. The fracture was compound and oblique of the tibia near the ankle. The upper shaft of the tibia projected through the integuments above, which were divided entirely across the front of the tibia. The fibula was simply fractured, but all the soft parts much contused above the ankle. The sharp projecting point of the tibia was sawed off for about three quarters of an inch. Previously to placing his limb in a temporary fracture box, Dr. Albert Ritchie suggested, that the same principle we adopted in the elliptical and vertical flap, or "the American Method" of the late Professor Davidge, in the amputation of the right leg, should be carried out in the left, or merely a depending point given to the wound for the escape of pus. For that purpose, with a long and narrow seton needle we passed a seton between the tibia and fibula on the outside, or fibula side of the tibia, and perforated the integuments to the left side of the tendo achilles. This was readily accomplished, as the integuments below were the only parts to perforate. The ends of the seton were tied loosely on the outside of the limb. The seton gave a depending point for the escape of matter about the vicinity of the fracture; prevented the accumulation of pus or

sinuses, which might involve the ligaments of the ankle joint, and lessen the adhesions of the sheaths of the tendons; thereby saving the system much local irritation and guarding against anchylosis. The leg was laid in a fracture box with linseed poultices over the exposed tibia, and to the seton below, which were repeated twice a day. The fracture box was soon laid aside, for the fracture case of Professor N. R. Smith, which added much to the comfort of the patient in the dressings of the limb. The limb was flexed, suspended and elevated, by an extra piece of canvass three inches wide, fastened to the frame on one side; (the wound could be cleansed, poultices renewed without any disturbance of the fracture;) the poultices were supported below by fastening the other end of the canvass to the opposite side of the frame. The poultices were continued until the exposed tibia was covered with granulations, when the seton was withdrawn and a tent of slippery elm bark about one and a half inches long, softened in warm water, was passed up the track of the seton from below. The tent was dressed with a small poultice, and the wound above with lint and cerate, until the wound ceased to discharge, when the tent was omitted about the 15th of July. By the 2d of August, I found the callus somewhat firm, and applied the "Immovable Apparatus," leaving room for the exercise of the ankle joint. This step was preparatory for the departure of my patient home in Baltimore county. I enforced the necessity of flexion and extension of the foot daily. In regard to the medical treatment, little was required. His fever was high on the 26th of May; when the lancet was used, and sulphate of magnesia prescribed, the fever yielded promptly. An occasional aperient was given; a few doses of Dover's powders to allay pain of the stump, which united very speedily. A free use of acid drinks, as the weather was warm, was indulged in. I have been credibly informed that he has perfect use of his ankle, which I doubt would have been the case if an outlet had not been kept up for the exit of pus. In this case the contusion and division of the soft parts would have led us to anticipate extensive inflammation and suppuration, which under ordinary treatment, would probably have required

counter openings to evacuate pus. In compound fractures of the worst form, accompanied with much contusion and division of the soft parts on the front of the inferior limbs, would not a seton or tent be preferable to the ordinary process of dossils of lint, and counter openings?

WM. WATERS, M.D.

FREDERICKTOWN, Maryland.

#### ORIGIN AND DEVELOPMENT

OF THE

### SACS AND PULPS OF THE HUMAN TEETH.

In the January Number for 1839, of the "Edinburgh Medical and Surgical Journal," is an able and well written paper on the above named subject by Mr. Goodsir, who has succeeded in discovering the rudiments of the teeth at a much earlier period than has been done by any former odontologist. He is of the opinion that they originate from mucous membrane, and that those of the secondary set, have no connection with the first. "Dentition," he says, "commences by the formation of the primitive dental groove, on the floor of which the rudiments of the pulps of the milk-teeth appear as globular or conical papillæ; septa afterwards pass from the outer to the inner side of the groove, between the papillæ, and thus each of the latter becomes situated in an open-mouthed follicle, which is the primitive condition of the future sac." He also tells us, that the germ of the first superior temporary molaris is the first of the rudiments of the milk-teeth that appears, and that this is discoverable some time between the sixth and seventh week of embryonic life. "It is at this period," says he, "a simple, free granular papilla, like many others on the surface of the mucous membrane and skin." Anterior to this, and in the same jaw, at about the eighth week, he has succeeded in discovering a second papilla, which is the germ of the cuspidatus or canine tooth.

The ridge within which is the groove that contains these papilla, advances in an "indistinct manner to the median line, during the ninth week," and on each side of this line, "an oblong papillæ with a notched lamina in front of it, and immediately afterwards another smaller papillæ, external to the former; these last papillæ," says he, "are the germs of the incisive teeth, and are placed in connection with the inter-maxillary system." The progress of the incisive papillæ during the tenth week is slow,

"their anterior laminæ only increasing somewhat in size." From the sides of the groove within which the germs of the primitive teeth are situated, processes shoot across and come together before and behind the rudiment of the first temporary molaris, enclosing it in a follicle, through the opening or mouth of which the papilla is observable. A like follicle is slowly formed around the germ of the cuspidatus. At about this period, the germ of the second primitive molaris, shows itself in the form of a small papilla, at the side, and seemingly "a production of the rounded lobule, which terminates posteriorly to the outer ridge." papilla of the incisores advance constantly during the eleventh and twelfth weeks, and septæ pass between them during this time, so that they become sunk as it were, each in a separate and well defined follicle. The germ of the anterior molaris undergoes but little apparent change, while that of the posterior enlarges, and by the gradual folding of the terminal lobule, which the author describes, becomes situated in a follicle like the other papillæ. Behind this, the primitive groove extends itself a short distance, within which the first permanent molaris first shows itself.

During the thirteenth week, the follicle of the second milk molar becomes more fully developed, and the rudimentary papillæ of the other teeth begin to assume the forms of the crowns of the teeth which they are respectively to form, the papillæ grow faster than the follicles, and protrude slightly from their mouths; the follicles however increase, so as soon to enclose the germs of the teeth, and thus become their matrices or sacs. From the time the matrices close, the papillæ of the first teeth become gradually moulded into the shape of the teeth that are formed from them. As the formative progress goes on, "each branch of the dental artery, as it arrives at the fundus of its destined sac, sends off a number of radiating twigs, which run in the substance of the cellular submucous tissue, (which constitutes the outer membrane of the sac) towards the gum, from which others proceed to inosculate with them." By "the combined twigs" of these, the true membrane of the sac is minutely ramified, while not the smallest fillet is sent to the granular substance. After sending off these, the dental branch "divides into a number of contorted

ramifications between the base of the pulp and the sac, which from smaller ramuscule are transmitted to the pulp itself." In the meantime, the germs of the first secondary molares are formed together with their follicles, within which they have become completely inclosed, and granular matter deposited within their sacs; the edges of the walls of the groove of these teeth adhere, but the walls themselves do not, by which a cavity of some size is left below the tooth, "or between it and the gum." "This cavity," says Mr. Goodsir, "is a reserve of delicate mucous membrane," and from which the materials for the second and third permanent molares, are furnished.

He denies, as we have before remarked, that the permanent teeth have their origin from the temporary ones, and contends that they, like these, have their origin from mucous membrane, having no connection with the others whatever. His researches have been conducted upon an extensive scale, and certainly throw much new and valuable light upon this department of odontology.

# CASE OF CONGENITAL DEFORMITY.

BY A. C. ROBINSON, M.D. LECT. ON ANAT. IN UNIV. OF MD.

On the morning of August 15th, 1839, \*\*\*\* an unmarried female, twenty-five years of age, gave birth to a female child, after a natural labor of several hours, during which I had been in attendance. Attempting to remove the infant from immediate contact with the mother, in order to tie and separate the cord, I found it retained and pressed close against the vaginal opening by an unusually short cord, which passed from the apex of a prominent tumor, occupying the central portion of the anterior abdominal walls. The cord proved to be so very short, the placenta being still retained, that great caution became necessary, in order to avoid injuring either the mother or the child. the infant was exposed, I discovered a large umbilical hernia, caused by an incomplete development in the abdominal parietes. The viscera were not entirely uncovered, however, for the sheath of the cord had been expanded to complete the abdominal walls, and confine them within some limits. Although thus partially confined, the abdominal contents were not concealed from view by their pellucid covering, but were as distinctly perceptible as if viewed through a thick moist watch glass.

A portion of the dark liver occupied the superior half, receiving into its great fissure the umbilical vein, rendered distinct under the transparent coats, by the dark placental blood, arrested in its course towards the porta, while the two hypogastric arteries, holding the same dark blood, were equally visible, making their way from the pelvis to the cord, which measured only eleven inches from the well developed placenta to the apex of the herniary tumor. This was quite large, measuring ten inches around its base, and five inches and three quarters of an inch from side to side, over its most prominent point.

The intestines were seen closely packed away below the liver, and their slight vermicular motion was perceived when the infant remained perfectly quiet, for while crying, the tumor became so tense, as to induce the fear, that its frail walls might yield, and the intestines be at once rolled out.

Vividly do I remember the appearance at this period, while the coats of the tumor were yet moist, and my regret, that some of my professional friends were not present to observe it with me.

The mother's supposition that she had completed the full period of pregnancy, appeared to be corroborated by the general development of her infant, which was twenty inches and a half in length, weighed, when very partially dressed, seven pounds, had well formed and rather pretty features, a very good complexion, and a strong voice. The inferior limbs, however, did not correspond in plumpness with the superior; nor were the toe nails as well developed as the finger nails.

As long as permitted, I continued to inspect, through their diaphonous coverings, the liver, the intestinal folds, and the vessels, passing to and from the cord, which were made distinct by the dark placental blood filling them. But my patient's extreme anxiety that her infant's cries should not apprise her neighbors of its existence, very soon obliged me to hand it over to the nurse. So strong was the poor girl's wish to conceal her shame, that she had feigned a visit from home, and for months preceding her accouchement, had confined herself entirely to the house of the benevolent female relative, who gave such practical evidence of genuine heartfelt sympathy for one so penitent, and so long oppressed by mental sufferings.

The coats of the tumor appearing directly continuous with the sheath of the cord, I concluded that in a few days, a separation would occur around the entire circle of their attachment, succeeded by the protrusion of the bowels, and the infant's immediate death. To my astonishment, instead of this anticipated result, the child lived three weeks, with all the functions of its system in an apparently healthy state, and continued to improve for more than two weeks. Although sometimes it seemed uneasy, it took nourishment with great avidity, digested it well, and slept even more than is usual for new born infants, being quieted by its anxious mother's unceasing efforts to soothe it.

At the first visit succeeding the birth, in the afternoon of the same day, I was sorry to find the coats of the tumor beginning to dry, and of course to lose their transparency, yet the enclosed organs were easily distinguishable, as they were also on the evening of the fourth day, when by permission, Drs. Reynolds and Cabell, resident students of the Baltimore Almshouse, visited the case with me.

Subsequently, I was obliged to forego the pleasure of inviting other professional friends to examine it, as I found the curiosity of the neighbors had already become excited, by the unostentatious visit of my two young medical friends to a house, the occupants of which lived so retiredly, as effectually to screen their private affairs and history from the impertinent scrutiny of surrounding gossips.

On the ninth day the cord was quite dry and withered, with a thin discharge about its root, while the parietes of the tumor had begun to ulcerate at distinct points along the periphery of the circle. As this progressed, I was surprised to find the ulceration not going beyond the most superficial coat, it alone separating around the entire circumference, and being thrown off in distinct patches over the surface, exposed the peritoneal membrane, overlaid by a delicate web of cellular tissue, which soon became covered with granulations, as if nature was struggling to complete her work by filling up the breach in the abdominal walls.

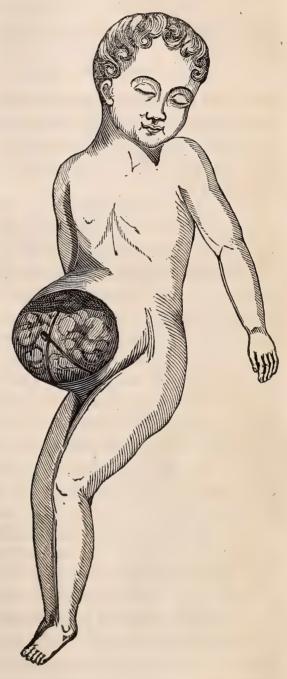
From day to day I watched the progress of this effort with an intensity of interest, with which the poor mother could not sympathise, her absorbing thought and unceasing effort being to hush her infant's fretting, and thus, if possible, prevent the further publication of her shame.

The process of separation went on, gradually exposing the small healthy granulations, which eventually spread over the whole surface, except at two points, one upon the superior aspect, an inch and a half square, the other two inches square upon the inferior face of the tumor, where the original external membranes, dry, shrivelled, and opaque, continued attached.

The infant remained free from any serious suffering, until the nineteenth day, when I found that the lower scale of membrane

referred to above had fallen off, exposing the naked peritoneum protruded by the intestines when unrestrained, and that a severe peritonitis had developed itself. This proved fatal in less than forty-eight hours.

The preparation now shows, an inch and a half of the naked peritoneum below, while over the space of two inches square upon the superior aspect of the tumor, the shrivelled, opaque remains of the original external membrane, composed as I conceive of the expanded chorion and amnion, forming the sheath of the cord, is still attached.



#### REMARKS

ON SOME OF THE

# MERCURIAL COMPOUNDS,

BY JAMES HAMILTON, M. D. BALTIMORE.

THERE are few medicinal agents embraced in the Dispensatory, more frequently employed in disease than the compounds of mercury, and of them it is to be regretted many are employed without a due knowledge of their composition or the principles on which they act.

In this remark, the preparations of Pil Hydrargyri, Hydrargyrum cum cretâ and Unguenta Hydrargyri, are particularly alluded to, and as such are intended to be the subject of this article.

The cause of the efficacy of these preparations has led to the adoption of many opinions, reducible however to two, viz. the presence and agency of the protoxide of mercury, or metallic mercury, in a minute state of subdivision; each of these has been upheld and supported by numerous contributors to periodicals, some teeming with contradictions and assertions, which can only be attributed to ignorance of the principles of chemistry or a desire to win popular esteem as authors; it is not to be wondered at then, that even at the present day, this question is acknowledged to be unsettled, inasmuch as but little positive proof has been brought forward by many of those who have thus far enlightened the medical world with their opinions.

As the question is one of undoubted interest to the intelligent physician, and is based on some of the properties of mercury itself, these necessarily will require an examination first, in order to relieve us of the discrepancies which appear in many of the articles already published on the subject.

The metals may be divided into two classes as regards the changes to which they are liable under common circumstances, some being oxidized at the common temperature, others remaining unaltered, and mercury in this respect is not sufficiently

known to be classed in either, Turner, Green, Brande, Gay, Lussac, and a number of others asserting that it is unaltered when pure, by exposure to air. Lagrange, Murray, Nicholson, Priestley, Fourcroy and others, on the contrary, that it slowly assumes the state of a protoxide.

Wood and Bache, in the U. S. Dispensatory, assert that "when perfectly pure, it undergoes no alteration by the action of air or water, but in its ordinary state suffers a slight tarnish," and follow it up by saying that "mercury, as it occurs in commerce, is very pure." From repeated observations, however, it is satisfactory to me, that pure as the metal may be, when exposed to air repeatedly, a grey film forms on its surface, which is increased by agitation and other circumstances to be alluded to hereafter; the mercury used in these observations has not only been carefully distilled, but also tested by appropriate chemical agents to prove its entire separation from any other metals with which it is sometimes adulterated, and which impart to it a facility of oxidation.

By continued agitation it has been long known that this change is easily accomplished, as even in the time of Bærhaave, (who first obtained it by subjecting mercury to the motion of wind-mills, carriage wheels, &c.) this fact was well known and the oxide designated *Ethiops per se*, and many of the authors who have denied its capability of oxidation by exposure to air, grant, that combined with agitation, this change is easily accomplished; there seems to be no doubt in this respect, that mercury when exposed to the action of air, becomes slowly oxidized and more rapidly when agitated; "by long agitation with access of air it becomes converted into a black powder or oxide, which gives out oxygen by heat, the metal being at the same time revived."\*

The presence of extraneous matter is however, acknowledged by all to facilitate this change. "It is oxidated even at natural temperatures when subjected to agitation, or still more easily, when triturated with any viscid matter, which is interposed between its globules so as to extend their surface;" but it does

not require the aid of trituration to effect this, as I have been assured by those who are compelled to resort to pure mercury, that simple contact with oils or other viscid matter has this effect to such an extent as to render it useless to them until purified by distillation, and all who have been in the habit of using pure mercury in their manipulations, must have observed the rapid oxidation whenever brought into contact with foreign substances.

#### PIL HYDRARGYRI.

This mercurial compound is as frequently employed as perhaps any other, though the results often obtained from its use are not equal to what are anticipated. In the United States and London Dispensatories, the mercury is triturated with confection of roses and liquorice root, in the Edinburg with conserve of roses and starch; in either case the materials are triturated until all appearance of metallic globules has ceased, and the mixture has attained that blueish grey appearance which has given rise to the name of blue mass.

A diversity of opinions are entertained with regard to the cause of the action which results from its use, some attributing it to the presence of the protoxide of mercury, others to mercury in a very minute state of subdivision. Let us examine the grounds which the latter have for this supposition.

Mr. Carpenter, in a memoir on "the Extinction of Mercury by Trituration," (Philadelphia, 1827,) has been at considerable pains to attempt to prove that the mercury is only in a minute state of subdivision and not oxidized, in which it need only be said he has failed.

Laugier (Cours de Chimie, Tom. 11, page 310,) says, "on est fondé a croire aujourdhui que ce changement de couleur tient seulement à l'extrême division desparties du metal," &c.

The United States Dispensatory, (1839,) says: "it was formerly thought that the metal was oxidized in the process, and that the medical activity of the preparation depended on the presence of the black or protoxide of mercury; at present, however, the change is generally attributed solely to the mechanical division of the metal, which in this state is supposed to be capable of acting on the system," &c.

In a paper communicated to the Journal of Pharmacy, (Philadelphia, 1829,) by Mr. Allinson, it is attempted to be proved:

1st. That the presence of the adhesive substances used in the preparation of the mass, "effectually prevent the contact of the air with nearly all of the metal employed."

2d. That the time used in its preparation is too brief for any action to take place even if the first objection were removed, (no doubt alluding to the fourteen years which Dr. Duncan relates that Bærhaave exposed his mercury to the action of a windmill,) and finally comes to the conclusion, that the popular idea of the inertness of metallic mercury on the system is erroneous.

In opposition to this we have testimony of much more weight, and founded on the authority of the best chemical authors. Ure, Eberle, Paris, Coxe, Murray, and a number of others, confirm the opinion generally received, that mercury in its uncombined state, has no action on the system, and the authors of the United States Dispensatory declare, "that it is considered to be inert." No metal can have any action on the system, or form any salts until oxidation first occurs, and those writers whom we have quoted assert that it is difficult to oxidate mercury at common temperature; again, metallic oxides are only active, inasmuch as meeting with the free hydrochloric, acetic or other acids in the stomach, they then form soluble and active salts. In order then to prove that mercury has any action on the system in its metallic state, it must first be proved, that acids act on pure metals, which is utterly impossible; next, that mercury is an exception to all the rest of the class of metals in its action on the human system.

On what principles of chemical reasoning can it be asserted that the mercury acts by virtue of some exclusive power, or that it can form a soluble salt in the stomach in its metallic state, but when we consider the oxide of mercury as the active agent, then we may readily account for its activity, as we can understand that a chloride or acetate of mercury has been formed from the acids to which we alluded, and a corresponding effect produced. 170

But it is said by some, (United States Dispensatory, for example,) that the action is attributable "solely to the mechanical division of the metal which in this state is supposed to be capable of acting on the system." If then these effects are produced by it in a minute state of subdivision, why is it, that in cases where from its weight it has been administered in large doses, these effects are not increased? Were it a solid substance, such a supposition might have some weight, as of course the more minutely divided, the more easily would action be induced, but mercury being a fluid, and its particles easily separated, this supposition is rendered out of the question, and hence it is found necessary to have resort to another mode of explaining it, by supposing as Mr. Phillips has done, that the mercury exists in the form of a suboxide, but let the existence of a suboxide of mercury be first proved, before its supposed action be used in theories.

As to the idea of the action of metallic mercury on the system, it is contradicted by the knowledge of the properties of all the rest of the metals, as however active or even poisonous their compounds may be, they themselves are entirely inert as instances of which gold, silver, antimony, arsenic and others, may be adduced. As to the idea of mercury in a minute state of subdivision, possessing this action of which so much has been written, it is not entitled to the slightest credence. In cases of persons where large quantities are given to act by its weight, there would be intense action and profuse ptyalism produced if possessed of any property of this kind, whereas we find the only inconvenience to which the patient is subjected, is the weight consequent on its use. It is also known that in the extraction of this metal from its mines, it becomes insensibly so incorporated, (if the term may be allowed) in the system, that a miner on passing a piece of gold or silver coin between his hands, covers it at once with an amalgam and still suffers no inconvenience from being subjected to its influence. In the latter case the mercury must be in a most minute state of subdivision, to such an extent as not to be visible on the surface, and consequently in a state best calculated to act on the system.

The proof that Mr. Allinson has attempted to bring forward is easily refuted, from the evidence which has already been adduced: 1st, those agents which he seems to think prevent oxidation by protection from contact with air, have been shown by the best authority to be the very cause of the rapidity of oxidation which ensues, and the 2d objection, viz. the time not being sufficient for the oxidation of the metal, is removed by the same means.

In his experiments on blue mass to detect protoxide of mercury, he states, "I boiled it in successive portions of distilled water until all the soluble matter was dissolved, then digested the residue in acetic acid with heat, no acetate of mercury was found;" but this is not astonishing, as Turner, whom he has quoted in his article states, that the protoxide "is easily affected by heat, by the direct solar rays and even by daylight;" and if so liable to decomposition, the repeated application of 212 F. was quite sufficient to resolve it into peroxide and metallic mercury, neither of which are acted on by acetic acid.

But we have authority of much more weight, proving the presence of the protoxide of mercury, as the active agent in this preparation. Eberle,\* in the description of its preparation, says, "the globules disappear, and the metal assumes the state of a black oxide," and Paris† confirms it in the following language. "The mercury in this preparation is not as it was formerly considered, in a state of mere mechanical division, but in that of a black oxide, upon which its activity as a remedy undoubtedly depends, for mercury in its metallic state, is entirely inert with regard to the living system."

In a series of experiments in relation to this subject, Mr. Donovant has satisfactorily proved that one hundred grains, or parts of mercury, after being rubbed or triturated for forty hours with honey, yielded ten per cent. of protoxide of mercury, and "its introduction as a substitute for those preparations in which the metal is oxidated by friction, is supposed to be advantageous from the uniformity of strength, as the others are liable to vary

<sup>\*</sup>Therapeutics, 1827. † Pharmacologia, vol. 2, 263. ‡ Annals of Philosophy, vol. 14. Vol. II.—No. 2.

from imperfect preparation; when properly prepared it appears to be the same in chemical composition, and the medicinal operation of it is also extremely similar."\*

These experiments of Mr. Donovan have long since decidedly settled this question in Europe, with the exception of some of the French writers, who are generally loth to adopt ideas promulgated by their English cotemporaries, but the opinion of Dr. Thompson† on the subject is at least entitled to respect, as proof of the importance which deservedly is attached to them. To counteract the effect of at least some of the essays which have been written on this subject, I have recently examined samples of the several varieties of blue mass which are found in our drug stores, and with the following results. Repeated washings by water, at common temperature, was used at first, to remove the feculous and saccharine matter, after which the residue was digested with pure acetic acid diluted, which being slowly evaporated, yielded flaky crystals of acetate of mercury.

Hydrochloric acid was then substituted for the acetic, evaporated, and the white residuum was rendered black by the addition of potassa, ammonia and hydrosulphuric acid, proving it to be protochloride of mercury; these experiments were conducted in a manner not intended to ascertain the quantity or per centage of oxide of mercury, but to prove its presence, which to my own mind they most satisfactorily have done. Finally, as to the cause of the activity of this preparation, no one who has any knowledge of even the elementary principles of chemistry, can ascribe it to any other than the presence of the protoxide of mercury; and to uphold any other belief, to say the least of it, betrays ignorance of the properties of the metal and its compounds.

Among the varieties of this article met with in this country, all, or nearly all, are prepared in England, and should be carefully examined before being used. Some manufacturers, in order

<sup>\*</sup> Murray.

<sup>† &</sup>quot;Every chemical reader who peruses the paper will agree with me in thinking, that it possesses unquestionable merit, and that Mr. Donovan has added very materially to the accuracy of our knowledge of the compounds of mercury," &c.

Thompson's Annals, vol. 16, page 17.

to brighten the color of the conserve of roses, used in its preparation, add to it a small quantity of sulphuric acid, which remaining in contact with the mercury, (or its oxide rather) forms a sulphate of mercury formerly called Turpeth Mineral, violently irritative in its action, which of course it imparts to the mass with which it is incorporated; of this, several examples have been recently observed, and the pernicious effects clearly traced to this cause.

One of the best preparations which has been seen for some time past, occurs in pound rolls, wrapped in tin foil and brown paper, with a plain label of "Pil. Hydrargyri" on the outside, and presumed to be manufactured by Davy Macmurdo & Co. London.

### HYDRARGYRUM CUM CRETA,

Though generally considered as less important and less frequently used than Pil. Hydrargyri, still forms a component of the physician's prescription. It is prepared by rubbing together three parts of mercury, and five of prepared carbonate of lime, until all appearances of globules have ceased to be visible, even with the aid of a lens.

Its action has been attempted to be explained, on the supposition that it is only mercury finely divided, but when decomposed by hydrochloric acid in excess, the residue will be found to darken on the addition of ammonia, &c. indicating the union of the acid with the protoxide of mercury. By this it is not intended to deny that the greater part of the mercury is in a minute state of division, but to assert that in this condition it is inert, and only owes its activity to the portion which is oxidized. As this compound is generally obtained, it is from manufacturers in London, where it is made on a large scale, and hence always contains more protoxide of mercury than when prepared according to the directions of the United States Pharmacopeia. must be evident, inasmuch as in the preparation of eight ounces (the quantity recommended by the United States,) the mercury is not subjected necessarily to the same action and exposure as when prepared by machinery on a larger scale, and is proved by

174

the result, that the English article when given to children, will generally act as an emetic, and occasionally violently so, whereas when prepared in smaller quantities, it exerts an opposite effect, and even will allay vomiting. Numerous cases have confirmed the truth of these remarks, and a compound like this which is generally used in the diseases of children, where the stomach is generally irritable, should always be prepared by the vender; when properly prepared there is no mercurial compound of a milder character, less liable to objection, better suited to the diseases of children, and proves at the same time the fallacy of the idea which attributes its action to aught else than the protoxide of mercury.

### UNGUENTA HYDRARGYRI.

In these preparations the mercury is gradually extinguished by trituration with lard, suet and other oleaginous compounds, and the different varieties only depend on the relative quantity of each ingredient. To enter into any minute investigation as to the cause of their activity is deemed unnecessary, as if the principles which have been already mentioned be correct, (and they are justified both by chemical reasoning and experimental proof,) the activity of all the varieties of the blue ointments, as they are generally termed, must be owing to the presence and chemical combination of the protoxide of mercury with the fatty matter. If not, why are these changes in color observed in the ointment, which every one who has prepared and used it, must have noticed? Why is it, that an ointment of twenty-one grains of protoxide of mercury to one ounce of lard, has been found by Mr. Donovan to possess the same power of producing ptyalism when used in smaller quantities? (and recommendations from the different hospitals in England have testified to its effects). Why is it, that in the various manipulations of gases with a mercurial trough, in which the hands are frequently dipped in contact with the mercury, that ptyalism is not produced. But those who uphold this theory must explain its action on the system when taken up by the capillaries in the metallic state; granting absorption into the capillary and lymphatic system in the metallic state, can it be proved that any metal exerts any influence on the system internally or externally applied, unless that influence is occasioned by its combination with some other agent, as oxygen, iodine, &c.

When mercury has been proved in its metallic state to act on the system, as an exception to all other metals, or when acids can be found to act upon metals without oxidation, then will it be granted that the action of the preceding compounds are not dependent on the presence of the protoxide of mercury.

### THE CASE OF MARGARETTA W\*\*\*\*\*\*\*

BY FRANCIS SCHURMANN, M.D.

EVERY medical practitioner has, in all probability, met with very virulent cases of small pox, but perhaps few with a case so terrible and rapidly destructive of organic life, and manifesting so thorough a diffusion of the poison, as the one I am about to describe, through its various stages, which I am induced to do by the suggestion of my worthy friend, Dr. Durkee, adding my treatment and the attending circumstances.

On the evening of the 12th of April, I was called to see Margaretta W-, aged five years, of spare habit and irritable constitution. Excepting the measles, a year previous she had had generally good health; the symptoms plainly indicated variola, and I was strengthened in this conclusion, from her having been exposed to the contagion some two weeks previously, without having been vaccinated. The first stage followed the usual course, save that there was more reaction than usual; her pulse resembling, in its frequency, the beating connected with scarlet fever, together with apparent gastric complication. Tartari tartarisat: 3 ss. vini stibiat 9 jj. aquæ font: 3 jj. every two hours half a tablespoonful; patient to be kept cool and to drink water. The spasms which occasionally appeared, left the patient as soon as taken from the bed. The prejudice of the parents gave me much to contend with, in regard to giving free or fresh air, light covering, and to keeping her as much out of bed as possible; and to their obstinacy do I ascribe the reproduction of the virus in the system and its putrid character.

The fourth day, after the manifestation of the disease in the morning, eruptions appeared on the face, neck and breast, of small red spots, which to the touch had a small knot in the centre, also here and there on the extremities; in the evening the eruption had rapidly extended over the whole surface, many of the maculæ being coherent; continuous high fever, great thirst, deli-

rium, pain in the abdomen, tongue coated; a small dose of calomel and jalap, a mustard plaster on the soles of the feet, and leeches on the temples.

16th April. The slight cathartic, leeches and mustard plaster, had given the patient a quiet night and two passages. Spots elevated to pustules; continued small doses of calomel and jalap.

17th April. A large portion of the eruptions had vanished; cool extremities, sopor, light spasmodic pulse. R. Rad. val. 3 ij. infusion 3 iij. cui. add: tinct. opii. gtt. xxx. every two hours, two teaspoonsful; mustard to calves, tepid bath omitted through obstinacy of parents. Evening same state, renewed mustard to the legs, a Dover powder, drink of water with a little French brandy.

17th April. Quite delirious during the whole night; hands particularly cold; the watery, sunken pustules, without red ring; tongue very dry, furrowed black. Urine limpid, like water; R. infus. valerian 3 iv. camphor gr. viii. a teaspoonful every two hours alternately, with R. calomel gr. i. pulv. opii. gr. 1-6 sach. alb. gr. v. Same drink as day before.

18th April. Nearly the same state. The rising pustules, which had now shown themselves over the whole body, had a black stigma in their centre; pulse still lower, skin cool, tongue the same. R. flor. arnicæ Div. aq. fervid: Ziv. g. camphor gr. x. M, a desert spoonful every two hours, alternately with the powders of yesterday; drink, barley water with acid elix. Halleri; mustard to calves. The prognostics were to day indeed bad, but there being no suffering of any vital organ, I still had hope. In the evening the pulse had risen almost imperceptibly. At nine o'clock, stronger and freer pulsations, warm skin, tongue less dry, frequent complaints of pain in the abdomen, from which I judged that there were still impurities there; having no ground to believe that inflammatory affections existed, as is often the case in fever of a typhus character; half tablespoonful of castor oil produced several very foul passages, evidently mixed with matter and blood; continued above remedies.

19th April. Continued improvement, the reaction of the heart more energetic, skin warm and moist; although the pustules re-

mained flat, they were nevertheless assuming a red ring, and many commenced suppurating. The face was nearly one continuous pock. This morning patient had several putrid passages, mixed with blood and matter to a greater degree than the night before. Gave arnica with camphor, also elixir acid: Halleri: discontinued opium and calomel, so as not to reduce the evacuation; on the contrary, endeavored to increase it by castor oil, so as to carry off the injurious secretions of the bowels; this object appearing to me a conditio sine qua non.

After this the disease took a more regulated course; suppuration and the drying of the pustules proceeded regularly, and my only care was to raise the system by stimulants and nourishment. Although slow, this seemed to succeed, until on the twenty-fifth a new scene presented itself to me, which threatened in its consequences to become more terribly destructive than the previously life-endangering disease. The mother directing my attention, I saw in the middle of the upper lip a black spot, of the size of a pin's head, which however, I did not then consider of moment.

On the twenty-sixth April, in the morning, I found, to my great surprise, this inconsiderable small speck to have spread over the entire side of the upper lip, up to the nose, and presenting a mummy-like dryness, with a velvet black color. I had a case of sphacelus siccus ex causa constitutionali before me. Nature had probably made a metastasis towards this part, but too weak to cause inflammation, it caused local death. Upon a closer inspection I found the lower lip, which externally appeared perfectly sound, to be, on the inside, entirely gangrenous, secreting an ichor that had a very offensive putrid smell. The lower gums were in the same condition. On the left side of the upper jaw, parallel with the left corner of the mouth, the organic destruction had formed a channel between the paries externa antri Highmori and the soft parts, which reached nearly to the margo infra-orbitalis, with a diameter of about a quarter of an inch. This spectacle roused all my sympathy, and I employed the most energetic means both externally and internally, to produce as much as possible, an immediate revivifying influence; a combined mode of treatment left me the only chance of arresting this spreading mortification. I cut with the scissors the part of the lip which presented that dark mummy-like surface, close to the sound part, without any hæmorrhage, and cauterized the edge of the wound with argentum nitricum. I cut also the destroyed cellular membrane of the gums, and of the lower lip, and filled the space between the gums and down the lip with lint, steeped in diluted muriatic acid, which was renewed every two hours, and also ordered a concentrated decoction of bark, mixed with a small portion of mur. acid, as a wash for the mouth. In the canal above described I also applied the above lint with acid. R. florum arnicæ, 3 j. aquæ fontanæ fervidæ § jjj. cui. adde, quin: sulp. gr. viii. laudani liquidi gtt. xxx. Every hour two teaspoonsful; at noon I removed the scabs, created by cauterization, and filled up their place with lint steeped in diluted mur. acid.

27th April. The mortification on the upper lip had made but little progress. I removed all destroyed matter, again applied caustic, and afterwards the steeped lint. The inside of the mouth looked frightful; the space between the lower lip and gums was full of fœtid putrid matter, which I had again to remove with the pincette. Decomposition was progressing rapidly. The margo alveolaris was entirely bare, the same destruction existed on the lower lip; I could remove entire pieces of putrid flesh without any trouble, so that scarcely any thing remained but the skin. I continued the same local and general treatment as the day before. The smell was so excessive that the whole room was filled with a pestiferous stench, and it was with the utmost effort that I could remain near the child to go through my operations. I could not rid my hands of the stench, until after repeated washings with soap and water.

28th April. No further destruction of the upper lip; on the contrary, the vitality had here been restored, and an inflammatory red ring surrounded the wound; the same state however continued as before in the mouth; the same destruction, and the same stench. The secretion of ichor was very copious; within one hour the lint was thoroughly saturated therewith. The four lower dentes incisores as well as the dentes canini, had dropped out, and the margo alveolaris was black. The maxilla was bare and visi-

ble as far as protuberantia mentalis externa. Besides, a hectic fever with a dry short cough, had developed itself. I again ordered a concentrated decoction of bark, cum tinctura myrrhæ as a wash for the mouth, as also chlorine water, partly as an antisepticum. This was alternately used in the mouth by teaspoonsful, with the above decoction of bark. Internally I gave R. quinin. sulphat: gr. viii. tincturæ ferri muriatici 3 j. infusi florum arnicæ 3 jjj. a half tablespoonful every two hours. Drink, wine and water.

29th April. The upper lip was better, the other remaining as before. The smell was less offensive, and thus far, the chlorine wash had answered my expectations.

30th April. The gangrenous surface of the mouth was cleaner, the destruction arrested. The secretion of ichor as copious as before; continued the same treatment.

1st May. The surface of the sore looked well, the secretion reduced.

2d and 3d May. Continued improvement, healthy granulations and pus. The upper lip cicatrized rapidly. R. unguenti basilici 3 ss. mercurii. rubri gr. x. fiat unguentum. This salve was applied with lint in the mouth, in lieu of the chlorine, which was discontinued. I gave a decoction of oak bark, mixed with muriatic acid, as a wash for the mouth; internally, the same medicine as on the twenty-eighth. I continued my treatment with the best result. I had the pleasure to see the general health gradually improve against all expectation. The hectic fever and cough disappeared in proportion as the strength increased. I caused this animated skeleton to be brought into the open air as often as possible, until the twentieth of May; up to this time the wound in the mouth was not cicatrized, and still a good deal of matter was ejected, although of a healthy character. After this I tried Peruvian balsam, spread very thinly on lint.

On the first of June the child was quite recovered. The upper lip had nearly regenerated itself. The deformity of the lower lip remained inconsiderable, and I expect that, in time, every vestige of this dreadful disease will vanish.

# REPORT OF CASES OF DEFORMED FEET,

TREATED BY MECHANICAL MEANS ALONE,

WITH A DESCRIPTION OF THE APPARATUS EMPLOYED.

BY HEBER CHASE, M.D., OF PHILADELPHIA.

[We publish by request, the following article, which we deem well worthy of the attention of the profession. Dr. Chase has shown in the most satisfactory manner, that the division of the tendons is not required in many cases in which it was deemed indispensable. He has also proved what difficulties may be overcome by perseverance and skill in the use of apparatus, and deserves the thanks of the public and the profession.]

In deformities of the feet, whether there exist an inversion or

eversion, the same principles will apply to their treatment. In these cases, whether the foot has advanced to the first, second or third degree of varus, as described by authors, the first step towards a restoration, consists in bringing the distorted foot into the same axis with the leg. This we have accomplished by means of an instrument represented in Fig. I. It consists of two parts, a brass splint, (a), and a steel plate, (b), connected by means of a malleable iron neck, (f), which can be bent, by considerable force, but will not yield to the power necessary to act upon the foot. The utility of this arrangement will be readily understood by the operator, because, in order to act to the greatest mechanical advantage upon the foot, the plate is required to be placed at different angles with the splint in different stages of the progress of restoration. The steel plate should be one inch in width for an adult, two lines in thickness, and extend to a distance equal to the interval between the ankle-joint and the ends of the toes.

In cases of inversion of the foot, the brass splint is applied to the outside of the leg. It should embrace one-third of the circumference of the limb, and should extend from just below the knee to the upper part of the external malleolus. It is secured to the limb by the straps (d, d).

By means of this apparatus, the foot is brought outward towards the steel plate as far as possible, without occasioning much pain, and is then confined by the strap (e), which is thrown around the foot and passed through the fenestræ (c, c).

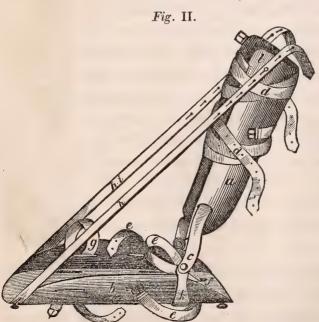
In the progress of the restoration of the foot, the strap surrounding it requires to be drawn more firmly from time to time, as will be mentioned in the report of cases.

In eversion of the foot, the brass splint is to be adjusted to the inner side of the leg, when the same principles will apply as in inversion.

The use of this instrument must be continued until the foot is brought into the same axis with the leg, and until the disposition to a return of the deformity has ceased.

The second indication to be fulfilled is to effect the proper flexion of the foot. This we have accomplished by means of the instrument represented in Fig. II.

It consists of a plate of brass (a) moulded to fit accurately to the back and sides of the leg, and extending from immediately below the knee to just above the malleolus. A second piece (b) formed to act as a sandal or shoe, equal in length, and a little



wider than the foot. These are attached by a hinge, (c, k) so as to admit of flexion and extension. The leg is secured in the brass splint, by straps,  $(d d_i)$ . The foot is secured to the shoe by a strap, (e) which is thrown around the instep, then passes through a fenestra behind the

heel, and the extremities being reverted, are returned over the instep, where they are secured by a buckle. There is also a strap, (g) intended to pass around the foot near the toes, in order to draw it outward, when flexion is being made. The fenestræ at the right and left of b, are for the passage of straps, when the instrument is employed in cases of eversion of the foot. hh, are two straps for approximating the extremities of the instrument; l, a knob for securing the straps.

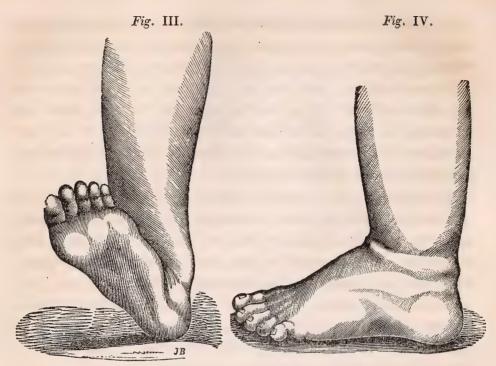
By examining the instrument itself, it will be seen, that the appendage marked k, does not clasp the shoe firmly, but stands out from it to the distance of half an inch on each side. This appendage passes beneath the shoe, and is attached by its centre, at a spot just anterior to the fenestra, (f,) by a universal joint with a limited motion. By means of this arrangement, when it becomes desirable to produce some degree of abduction of the foot in cases of inversion, this object may be accomplished by drawing the strap h i, more firmly than its fellow.

The leg is to be placed in the brass splint a, the foot in the shoe b, the leg is secured by the straps d d, the heel kept down by the strap e, and if desirable, the loop of the strap g, thrown around the foot in cases of varus, to produce partial abduction.

During the progress of restoration, the straps h i, and h, are to be drawn, from day to day, more tense, as the foot yields to the action of the instrument.

In deformities of the feet varying from those above mentioned, the instrument employed will be described in connection with the cases.

Case I. Congenital Calcanean Club-foot of the left side; Restoration of the foot to a natural position by mechanical means, in twenty days.—On the thirteenth of July, 1840, J. B. H. Esq., of this city, requested me to see his little son, a healthy robust child, four weeks old, and whom I found to have a deformity of the left foot—(calcanean club foot of the worst variety.) The deformity is congenital—no cause can be assigned for it—Mrs. H. is the mother of several children, all of whom are perfect in their limbs, nor can there be traced a deformity either in the paternal or maternal branches of the family, both of which are numerous.



The dorsum of the foot was drawn upward, in such a manner as to rest firmly upon the lower part of the front of the leg, whilst an obliquity caused the small toe to rest on a line with the inner side of the leg. See Fig. III.

From the tender age of the child, it was not to be expected that much rigidity of the misplaced parts could have taken place as yet; therefore, the foot could be brought nearly to its true position, by moderate force applied to it by the hand, whilst the leg and ankle were supported; but returned immediately to its distorted position when these efforts ceased.

There was some want of development in the foot and leg generally, when compared with its fellow; and at the lower part of the leg, where the dorsum of the foot rested upon it, the subcutaneous fat and cellular tissue were to a considerable degree wanting, and the leg, when the foot was elevated, presented a perfect cast of the dorsum of the foot.

For the relief of this deformity, I applied to the outer side of the leg, for the purpose of bringing the foot not only downward, but inward, an instrument extending from the knee to the bottom of the foot similar to that represented in Fig. I, with the plate c, bent at a right angle with the splint at f, and secured by the

straps b b. The foot was then brought down to half the distance required for restoration, and secured by a roller passing round it and through the fenestræ.

For a few days, I saw this patient daily, afterwards, less frequently. At each visit I adjusted the instrument when necessary, bringing the foot nearer to the required degree of extension and eversion until the second of August, when it was brought to the correct position as seen in Fig. IV., and remained so when the instrument was removed.

Aug. 15th. The patient has apparently suffered very little from the dressings. Not even an abrasion of the skin has followed the use of the instrument, and the child enjoys all the proper motions of the foot with perfect freedom.

October 16th, 1840. This little patient has been able, for several days past, to stand even upon his feet.

CASE II. Congenital Inversion of the Right Foot, of the worst variety—(varus of the third degree)—Treated with Complicated Machinery for several months, with little or no effect.—Restored in thirty-one days by a simple apparatus.—Early in the autumn of 1839, my attention was called to Samuel M'Kee Chambers, ætat. 2, who had a complete inversion of the right foot. He was walking upon the outer edge of the foot, which had formed for itself a perfect cushion, upon which it rested—the sole turning backward whilst the toes pointed directly toward the opposite ankle. See Fig. V. In addition to this inversion of the foot, there was a defect in the kneejoint, permitting the leg to revolve upon the thigh, to the extent of one-fourth of a circle, and by the application of some force, the toes could be made to point directly backward. This seemed to be owing to a change in the cartilages of the joint, and the relaxation of the capsular and other ligaments. The leg itself was somewhat smaller than its fellow, but the thigh appeared of its natural dimension.

As soon as an apparatus could be prepared, I adjusted it to the foot of the child, and kept it in constant use, until May, 1840, when finding that very little progress had been made towards a permanent restoration of the foot, and that the patient was very

unwilling to wear the machine, the instrument was laid aside. The leg, however, had commenced increasing in size—the knee had acquired some strength, and the limb was brought partially to its true position.

July 1st, 1840. Having now succeeded in the restoration of other cases of deformed feet requiring more difficult treatment, I

again returned to my patient.

On the 3d of July, I applied an instrument similar to the first of those described in the introduction to this paper, (Fig. I,) and by the 10th, the foot was brought on a line with the leg. On the 12th, the apparatus for flexion, (Fig. II,) was adjusted, which brought the foot to the position as seen in Fig. VI, in thirty-one days from the application of the first instrument.



Until the 15th of July, the foot was daily brought nearer to the desired position. Very little pain was experienced, no soreness was occasioned by the pressure, and the patient who is one of the most robust, obstinate, and restless of children, ran at large in the streets at will, during the whole treatment. An ordinary shoe was applied on the 12th of August.

This is the only instance of any deformity known to have occurred in this family, either in the paternal or maternal branches, and no cause can be assigned for it by the parents.

Neither the tendons nor the fascia plantaris offer any resistance to the permanency of the foot as restored, nor do the tarsal or metatarsal bones exhibit that rigidity which so often limits motion, until a late period after the foot is brought to its natural shape.

The foot in walking, assumes its proper position, and the patient does not limp or hesitate at all in his movements. The arch of the instep is not defective, and all the varied motions, even including abduction, are performed as perfectly as upon the opposite side.

October 18th, 1840. Two weeks ago I called to ascertain the situation of my patient's foot, and found him in the street, barefooted, and was told he had been without his shoes for three weeks. No relapse from the original restoration had followed, and on the 15th inst. I exhibited this case to my class in a lecture on deformities.

CASE III. Deformity of the Left Foot, not Congenital, (Pes Equinus of the third degree, of six years' duration, combined with Partial Inversion of the front part of the foot,) Restored in twenty-one days.—The subject of this case, J. Arbuckle, ætat. 11, was soon after birth, observed, according to the statement of his parents, to have an unusual stiffness in the ankles, which, however, in his earlier years gave him no material inconvenience. He was remarkably healthy, very active, and walked at the usual age of childhood.

Occasionally, up to his fifth year, he complained of a pain in the hip for a short time. This difficulty never attracted the attention of his parents, particularly, until the foot was observed to turn gradually inward, and the heel to become elevated. Medical aid was then called. Bandages and splints were applied, but the deformity proving very obstinate, they were abandoned.

During the month of April of the present year, I saw the patient for the first time. There was, at this period, a partial inversion of the front part of the foot by rotation at the middle joint of the tarsus, while the distance from the toes to the

heel was five and three-fourth inches; the direction of the foot being nearly perpendicular, as seen in Fig. VII.



There was a want of development in the glutei muscles—the thigh, leg, and foot were also smaller than those of the opposite side, and the whole foot was remarkably rigid. The tendo Achillis was very stiff, and the bones of the tarsus were prominent, as is seen in Fig. VII, and in short, the limb had undergone all the usual changes which take place, where it becomes necessary to sustain the weight of the body on the toes for a great length of time.

There was also a relaxation of the ligaments of the knee-joint, and while walking, the knee performed a peculiar rotatory motion outwards, which greatly retarded the patient's progress. These combined motions of the limb, together with the elevation of the foot, rendered it almost impossible for him to walk. He would frequently fall in the street, and after going a short distance, would suffer extreme pain in the foot and leg.

On the 11th of May, I applied to the outer side of the leg, the brass splint accurately moulded to the limb and the upper part of the external malleolus, extending from just below the knee to the last mentioned point.

After the application of this apparatus, the foot was drawn daily more and more toward the desired position, until, at the end of one week, it was brought into a direct line with the leg.

To fulfil the second indication—the flexion of the foot—the instrument represented in Fig. II, was applied. The apparatus was secured to the leg and foot, and bound firmly at the instep by means of the strap, (f). The point of the sandal and the upper extremity of the splint at the knee, approximated daily by the aid of the two lateral straps connecting those points, until the twenty-first day after the second instrument was applied, when the foot was restored to its proper position.

After the first few days the patient was able to begin to walk, which accelerated the flexion.

The pain produced by these instruments throughout the whole operation was by no means worth regarding. The process of restoration was slow but constant, and the changes brought about so gradual, that not even an unpleasant sensation was experienced beyond an hour, at any one time during the treatment. Not the slightest inconvenience was felt in any of the tendons, not even in the tendo Achillis during the treatment, but the pain was confined to the outer side of the foot during the abduction, and to the instep, during the flexion.

An abrasion of the skin took place and continued for a few days, being caused by frictions which were employed in aid of the treatment, but no such result was produced by the apparatus.

September 28th. There is still considerable rigidity in the instep. The motions of the foot are limited, and in walking, the rotatory motion of the knee is apparent. It is expected that support for the knee and continued exercise of the foot, will in time overcome these difficulties.

The condition of the foot, thirty days after the application of the first instrument, is shown in Fig. VIII.

This patient was seen, at different stages of the treatment, by Professor George McClellan, Drs. E. W. Leach of Boston, Bald-

win of Georgia, and Drs. R. Coates, Brewer, and West, of this city.

CASE IV. Greatly Distorted Foot, from exposure, which commenced in early life, restored in fifty-one days, by mechanical means alone.—In the spring of 1840, my attention was called to Julia Dunmore, who was standing upon her crutches and on one foot, resting herself. The patient is now fourteen and a half years old, healthy, and as active as could possibly be expected, with the deformity under which she labors. She was a remarkably healthy and unusually active child—walked readily when nine months old—but at the age of a year and a half, she entirely lost the use of her limbs from exposure in a damp cellar, was placed under medical treatment, and recovered the motion of her extremities except that of her right foot, so far as to be able to walk in six months, with the aid of one crutch. She retained this power for some time, when it was observed that the hip was enlarging, and the leg growing shorter. A second crutch was then obtained, and the patient began to place the foot to the The ankle was still however weak, but she continued to rest upon this as well as on the opposite leg, in walking. The ankle continued giving way, until the foot was brought to the position seen in Fig. IX., and thus she remained when she came under my care.

The whole limb was at that period much emaciated, measuring only five inches in circumference, at the ankle, six and a half at the knee, and eight inches at the largest circumference of the thigh. The hip, and in fact the right side of the body, partook of the general emaciation.

She could stand, but she could not walk without her crutches, and she was so feeble in her limbs, that when she fell, she was compelled to crawl upon her knees, until she met with something by which she could raise herself up. The use of the limb produced great fatigue in it.

It would seem almost impossible that a greater deformity, or one more difficult of restoration, could exist, than is here shown. The foot was completely reversed. The patient rested the limb

on the instep, which had been so long accustomed to pressure, that an enormous cushion (see Fig. IX., a.) had been formed to protect the foot from the ill-directed pressure.

In the treatment of this case, the same principles were to be applied as in the foregoing. The foot was first to be brought to the same axis with the leg, after which, flexion was to be made.

Accordingly, on Saturday, the 22d of May, 1840, I applied the brass splint to the outer side of the leg, as described in the preceding case. By the aid of the strap around the foot, I drew it daily nearer the line with the leg, until the tenth day, when it was made to assume the position seen in Fig. X.

On Monday, June 15th, I commenced flexion, and succeeded at the end of fifty-one days, in bringing the foot to the position seen in Fig. XI.

The entire restitution of the natural position of this foot, was accomplished perhaps with less difficulty than would be presumed by observing it in its distorted state. This was owing to the relaxation of the ligaments, and the ease with which the bones moved upon each other.



In the restoration of the foot, the pain experienced was comparatively little. In both rotation and flexion of the foot, this sensation was principally confined to the osseous structure.

With some effort this patient could bring her heel to the floor on the 10th of July, and on the 13th she began walking for the first time, and on the 30th the foot exhibited the apearance seen in Fig. XI.



That part of the foot on which it rested during the greatest degree of deformity, is now seen at a.

By reference to this figure it will be observed, that the leg is thrown slightly backward upon the foot, in consequence of a loss of proper action in the tarsus. This action the patient will again recover.

This patient has been seen by Drs. R. Coates, West, and Brewer; Drs. E. W. Leach of Boston, and Baldwin of Georgia.

Note.—October 17th, 1840. This patient has gained the use of her foot at the instep, and the leg is thrown forward to the proper position. She can walk several squares without much fatigue, and the general appearance of the foot is much improved from that seen in Fig. XI. She was examined by my class on the 15th inst.

Case V. Everted Deformed Foot; deformity commenced at two years of age, from paralysis; restored in ninety days by mechanical means.—During the month of February, 1840, Professors George and Samuel McClellan referred to my care Mr. J. B., aged twenty-five years, who was laboring under an everted deformed foot, as seen in Fig. XII., the history of which as given by the gentleman himself and his parents is as follows:

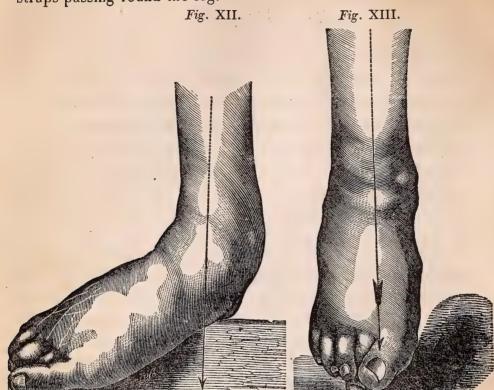
He was a healthy, fat child, and walked readily at nine months old. At two years of age he was suddenly seized with paralysis of the lower extremities, and spasm of the muscles of the back of the neck: his head was drawn far backward, and remained immovable for several weeks. He could not walk or sit without support, and both legs became entirely useless. This state of things was followed by several months of severe illness, when the left limb gradually recovered. At three and a half years of age he could climb up by a chair. At eight years old he could walk a short distance by the aid of two crutches, and continued in this situation for eight or ten years. He then walked four or five years with a crutch and a cane, and afterwards with a cane only.

Neither of his ankles had entirely recovered from paralysis when he began to bear his weight upon his feet; and as his general health improved, enabling him to take more exercise, his ankles, particularly the right one, gradually gave way, and assumed the appearance represented in the figure referred to.

The internal malleolus was very prominent, the bones of the instep rigid, the foot attenuated, and the leg and thigh much smaller than those of the opposite side. The left foot was also slightly everted. He had no control over his toes. In walking, the foot was thrown outward, resting upon the inner edge, and the internal malleolus came nearly to the ground. He suffered much pain in the ankle and leg in walking.

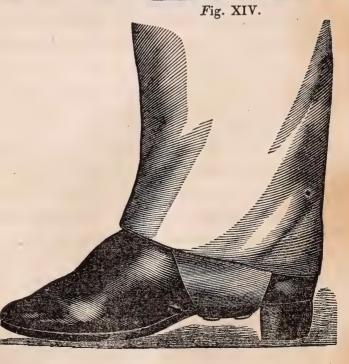
By considerable effort the foot could be brought inward nearly on a line with the leg, and in order to retain it permanently, a firm gaiter-boot was fitted to the foot and ankle. Two plates of steel were provided, three quarters of an inch wide, two lines in thickness, and attached at their upper extremities by means of a semicircular plate, designed to pass behind the leg near the knee. These were long enough to extend from the knee along each side of the leg to the bottom of the boot, beneath which they were bent and united by their extremities. Attached to the inner plate at the internal malleolus was a circular piece of steel plate three inches in diameter, about two lines in thickness at the circumference, and one-fourth of an inch at the centre. The whole

being suitably padded was applied to the foot, and confined by straps passing round the leg.



This boot and its appendages were worn for ninety days, when the foot assumed the position seen in Fig. XIII.

The pressure at the internal malleolus by the circular steel plate was quite firm, and produced considerable pain in walking for the first few weeks.



The rigidity of the ankle-bones limited the flexion of the foot for some time after it was brought to a line with the leg.

At this period, Sept. 8th, the patient begins to enjoy the motions of the leg on the foot, and also to move his toes; the leg has increased one-fourth in size since the commencement of the treatment, and he is able to walk without any support, and without fatigue.

Drs. Bacon, Woodward, Smith, Morgan, Cogswell, and Ives of New England, are familiar with this case, and Professors Tully and Knight have examined the patient since his foot was restored—also the gentlemen kindly referred him to my care.

I have several patients under treatment for the cure of false anchylosis of the knee-joint, with different degrees of flexion. Three cases have been perfectly restored. Some of these deformities are of many years' standing. The results we propose to relate in a future number of this Journal.

# NAVAL.

\* \* \* \* \* If all, or any part of the following is worthy of your notice, you can give it a place in the Journal.

With great respect, and friendship,

THOMAS WILLIAMSON.

To Dr. Roberts, Baltimore, Maryland.

Portsmouth, Virginia, 3d September, 1841.

I would beg leave to call the attention of the Medical Faculty of my native State, and elsewhere, to the use of the flour of the slippery elm, as a dietetic, medical, and surgical article of great value. I have well tested it, and most sincerely do I desire, that others may find it as useful as I have done. No vessel of war, or merchant ship, should go to sea without it, and every army should be well supplied with it. The growth of our dear country, and so easily and cheaply obtained, are great reasons why we should notice it, instead of constantly searching after exotics, far less valuable. It affords a great amount of sustenance in a very small compass. Is very portable—allays thirst alleviates many diseases and injuries, and will ever in case of shipwreck, be of infinite service—to our army in Florida, contending against a climate, more destructive than the Indians, and upon all their other stations—to the French army in Africa searching for the Arab, living upon his gum arabic, would I strongly recommend this red elm flour, as an article of diet, if in great want, diseased, or wounded. As a mucilaginous diluent in the various forms of fever, and as a palatable ptysan, by the addition of balm, sage, or mint leaf, in Cholera Infantum, Diarrhœa, Catarrh, &c. Externally, I like it much as a wash for the various eruptive diseases of children—applied in the form of a poultice to gun shot wounds, it will be found of signal advantage, and as sailors or soldiers can instantly apply it, upon the reception of a wound, as it will be better in their cases to have it cold than warm.

It inspires some little confidence in encountering difficulties, when we have in our pocket an article of diet, a valuable medicine, and in case we are wounded, a simple application, which will very much alleviate our suffering. As all of our apothecaries have the article I have spoken of, and there being directions accompanying it, I do not deem it necessary at present to say more. I would, however, suggest to our southern friends who may suffer from the various grades of fever, to give this diluent (with the addition of ice) in small doses, where there is intense gastric irritation, resorting however to other energetic means in the cases, as the symptoms may indicate. If these concise remarks may be the means of alleviating a single case, I shall be amply repaid for calling attention to the ulmus fulvus americanus.

### ORDERS FOR 1841.

Aug. 6th.—Surgeon, B. F. Bache, Mediterranean Squadron.

6th.—Surgeon, G. B. McKnight, receiving ship, Norfolk.

7th.—Surgeon, G. R. B. Horner, Ship Delaware, and as Fleet Surgeon.

7th.—Ass't. Surg. C. W. Tait, Naval Hospital Pensacola.

13th.—Surgeon G. W. Codwise, leave three months, having retired from coast of Brazil on sick ticket.

13th.—Assistant Surgeon, S. W. Kellogg, brig Consort.

17th.—Surgeon W. P. C. Barton, Naval Asylum, Philadelphia.

21st.—Passed Asssistant Surgeon, J. D. Miller, Navy Yard, Philadelphia.

21st.—Assist. Surgeon, W. Grier, Naval Hospital, N. York.

27th.—Assistant Surgeon, J. Beale, Naval Asylum, Phila.

#### OFFICERS RELIEVED AND DETACHED.

7th.—Surgeon J. Cornick, from Ship Delaware.

7th.—Assistant Surgeon, J. Huntington, from Naval Hospital, Pensacola.

7th.—Assistant Surgeon, J. M. Minor, from Brig Consort.

23d.—Assistant Surgeon, J. S. Messersmith, to the Brig Dolphin.

# MEDICAL LITERATURE.

### HISTORY OF JEWISH PHYSICIANS.

BY E. CARMOLY.

(Continued.)

§ XX.

#### SCHABTAI DONOLO.

Some learned Israelites emigrated into Sicily with the Arabs, and formed there Institutions for the cultivation of letters and the Sciences. They founded the celebrated schools of Tarentum, Palermo, Salernum and Bari, where medicine was taught with remarkable care. Schabtai Donolo gained an exalted reputation in the healing art, and was styled as a mark of distinction the physician.

He was born at Aversa, about the 913th year of the common era,\* he studied under the Rabbi Uriel, one of the ten pious Rabbis, who were massacred in the year 925. At that period a body of Moors made a descent on the city of Aversa, and took it, and put to the sword a great number of the inhabitants, others they led captives to Palermo and Africa. Among these were the relatives of our Schabtai. He himself escaped and took refuge at Tarentum, then scarcely twelve years of age.

After having finished his studies with distinction at this city, and probably also at Salernum, he travelled to all parts of Italy,

<sup>\*</sup> See our notice of Schabtai Donolo, taken from MSS. of the King's Library.

where he believed he should find learned Israelites to teach him the science of Astronomy. But he could find no one who could gratify his desires. He then addressed himself to the learned Greeks and Arabians, and after long search, he finally found a learned man from Bagdad, named Bagrat, who taught him this science, and he became one of the most learned men of his nation.

We have from his hand an excellent commentary, on the Book of Jezirah, a work which had already occupied the pen of two learned cotemporaries, the celebrated Saadia Gaon,\* and the learned Isaac Ben Suleiman Israeli, as we have already declared above. This commentary which bears the title of Sefer Tachkemoni, is found in manuscript in the Royal Library of Paris.

We have also of this author excellent fragments of his Book of Astrology, (Sefer Ha Masalot,) and of his commentary on the Baraita of Samuel, a learned Israelite astronomer, who must not however be confounded with the physician Samuel, of whom we have already spoken in this work. As regards his medical labors we have found it impossible to discover as yet, any thing in the writings of the ancient doctors. It is to be presumed that they have been lost, in the various persecutions which the Jews suffered during the middle ages.

## § XXI.

### SCHOOL OF SALERNUM.

Although history has not said positively that Schabtai obtained his medical knowledge at Salernum, it is without doubt, that it was only in this city where the Jews divided with the Greeks and Saracens, the glory of having founded this celebrated school, the duration of which was as short, as its origin was ancient. Many languages were used there, and to accommodate the wants

<sup>\*</sup> See our life of Saadia Gaon, p. 19.

of their auditors, Pontus taught in Greek, Abd Alla in Arabic, and Elisha in Hebrew.\*

This last professor is only known by the quotation of Clifton, he was probably of Salernum itself, where the Israelites had institutions from time immemorial. They enjoyed freedom and other important privileges under the Ducal protection. It was not until 1086, that the Duchess Siehelgaite, wife of Duke Roger, bequeathed to the church of Notre Dame of Salernum, the revenues of all the Jews who lived in that city, and her husband Duke of Punille and son of Robert Guiscard, ceded all the revenue derived from the Jews who lived there, to the Archbishop of Salernum.† Nevertheless, the Jews of Salernum, did not abandon their devotion to medicine. We feel confident that it rather formed among them a kind of national education, by which they found the means as by commerce, to amass great riches, and enable them to discharge the thousand and one various taxes imposed upon them, such as the platiacum, the portulaticum, the dationes, the paraverdum, the pulveraticum, the mansionaticum, the canaticum, &c.

We shall often have occasion, in the course of this work, to speak of the Jewish physicians of the Salernum school, and we will only state here, that in a period when they were the sole depositories of the European medicine, which they communicated from the Arabs to the Christians, they established with the aid of the Greek and Arabic physicians this ancient school, which during a long period had in Europe no rival, but the University of Montpelier.

## § XXII.

### CHASDAI BEN-SPROT.

During a long period the Jews successfully cultivated the learning of the Arabians in Spain. They particularly excelled in the study of astronomy and medicine. Among those learned in this last science Chasdai ben Sprot, deserves the first rank.

<sup>\*</sup> Notice of Schabtai Donolo, p. 16. † Bochus Pirrhus.

<sup>†</sup> Sicilia Sacra, book 1, p. 76.

Chasdai ben-Sprot, or as he is called by the Arabs, Hasdai Ben Baschrout, and whose full name is Chasdai ben Isaac ben Ezra ben-Sprot, was at the same time a physician, astronomer, poet, and particularly a statesman.\* In a propitious period he attached himself to Abd-Alrakman III, surnamed Naser-Liddin-Alleh, Caliph of Cordova, who promoted him to the rank of prime minister.

As this monarch frequently received ambassadors from foreign princes, Chasdai always procured information through these envoys of the condition of his brethren in foreign countries. In 948 he learned from certain deputies from Khorasan, that a Jewish kingdom existed in Khozarie, but he did not credit their statements, believing that they were dictated by a desire to obtain his favor.

However, some time afterwards, the ambassadors of the Emperor of Constantinople, Roman III, informed him, that there really existed a kingdom of Khozars, whose chief, named Joseph, professed Judaism, from whom there arrived in the ports of the Greek empire, ships laden with fish, furs, and other merchandise.

Chasdai ben-Sprot, then resolved to address a letter to the king of the Khozars, with the hope of obtaining more accurate information. The verses of this curious poem, form an acrostic rhyme, exhibiting the name and surname of the author. This is one of the most ancient fragments of the Hebrew poetry of the middle ages, which has come down to our times. It proves that the Jews had then already borrowed from the Arabs the use of rhyme, which was entirely unknown to them in former periods.

The king of the Khozars condescended to reply by a letter, probably drawn up by one of the Spanish Jews, who resided at Itel. These two letters were printed for the first time at Constantinople, in 1575, by the care of Isaac Karisch.

Chasdai ben-Sprot received about the same period a reply to another letter, which he had written to Bagdad, to ascertain the condition of his brethren in the Chalifat. The author of this reply, is the Rabbi Dossa, son of the celebrated Saadia Gaon.

<sup>\*</sup> EBN. ABI OSAIBA. Histoire des Medecins, chap. III.

But this letter of Chasdai, as well as his other works, has become the prey of time, this is to be regretted, especially in reference to his medical works, for according to the Arabian writers, he has written much upon medicine, principally upon Arabic Materia Medica. Abou Daoud Soleiman ben Hassan, a physician known by the name of Eben Djoldjal, informs us of all that remains of this production.\*

Among the physicians of Cordova who devoted themselves to the study of the Treatise of Dioscorides, no one evidenced more zeal and assiduity, on account of the favor which he enjoyed near the prince Naser Abd Alrahman, than Hasdai ben Baschrout Israeli, (the Israelite.) The monk Nicholas was his intimate friend, and his regard for him in return was unbounded. Chasdai translated all the names of the medicines described in the Treatise of Dioscorides, which were unknown to the Arabs. He also first composed at Cordova the Treatise on Materia Medica, called Farouk, and determined the true nature of the substance called Schadjaryych which enters into its composition.

# § XXIII.

### PROGRESS OF MEDICINE.

The tenth century was particularly remarkable for the progress of medicine among the Jews. Hippocrates who continually referred to experience, and Galen so profound in his observations, were held in high favor by those doctors; it is nevertheless true, that the works of the doctors would have been more useful to the science if they had observed nature more. On the other hand they regarded the dissection of bodies as a profanity, and surgery as an ignoble profession; which opinion was injurious to the improvement of medicine.

From whatever cause it may be produced, this age witnessed the birth of a great number of celebrated Jewish physicians, viz. Haroun of Cordova, Iehuda Chaioug of Fez, Amram of Toledo, &c. Haroun who held the first rank among the physicians of his

<sup>\*</sup> EBN ABI OSAIBA. History of Physicians, chap. II.

time was born at Cordova in the reign of Abd Adlrahman III, and was brought up with great care by his father Isaac. He began to be distinguished about the year 965, and became a professor in the University of his native city. In 975, he published a commentary on Ebn Sina,\* which secured him immediate fame among the Arabian physicians.

This celebrated man full of honors had approached the end of his career, when a young man in the prime of age and talent presented himself in the lists to contend with him for the palm of glory. This young man was *Iehuda Chaioug*. He was already distinguished as the first grammarian of his nation, when he undertook the commentary on Ebn Sina, which deserves a higher rank than the work by Haroun.†

Chaioug, or as he is known among the Arabs, Iahai ben David Ebn Zacharias, was the son of David Fezi or of Fez. Endowed with a happy faculty, he cultivated most propitiously his natural talents, and distinguished himself by his efforts at the school of Karoun, which then rivalled the best scientific institutions of the Arabs. Time has destroyed the commentary, which would enable us to judge of the scientific and literary merits of Chaioug in medicine at that period.

Before his time *Emran ben Isaac*<sup>†</sup> had professed the healing art at Toledo with great reputation. At a later period he filled the place of secretary, of the Arabic tongue, when he was sent by the government to Seville, on the occasion of imposing a tribute. The governor of that city having been offended by him put him to death in the 387th year of the Hegira, the 997 of the common Era. *Emran* was a man very able in Medicine, Philosophy and Astrology; but we are not informed of his having written any thing on these different sciences.

<sup>\*</sup> Casiri, Bibliot Ar. Esp. book I, p. 286.

<sup>†</sup> MSS. of our Library, No. 142.

<sup>‡</sup> LEO AFRICANUS. De viribus illustribus, chap. XXVIII.

## § XXIV.

#### MEDICINE IS CULTIVATED BY THE RABBIS.

Jewish medicine about the commencement of the eleventh century, advanced with gigantic steps, and assumed a firm and decided character. This was in consequence of its introduction into the schools of the Rabbis, who became almost the sole physicians of Europe, "The Oriental languages" said the learned Cabanis,\* were familiar to them, and at a time when Galen, Hippocrates, and the other fathers of medicine were only known in the west through the medium of Syriac and Arabic translations; the Jews were almost the only persons who knew how to treat diseases with some system, from the advantages derived from the works of antiquity."

In fact they then devoted themselves so much to medicine, that this science became one of the principal objects of their labor. Each prince, each prelate, had his Israelite physician, who were more than once involved in religious controversies. Such among others, was the case with the physician of the Emperor Henry III, who, according to the canon Anselmo, toften proposed to Wazon, Bishop of Leige, difficulties in reference to the Bible. One day he declared, that he would even pledge one of his fingers, that no one would ever be able to confute him by the authority of the Holy Scripture. It is supposed that the Rabbi was very soon vanquished, as Anselmo assures us, he even confessed his defeat, and offered to give up with a good grace, the finger he had lost in the wager; but the Bishop said to him, smiling, that he would trust to his good faith until he should claim it. According to the Art of Verifying Dates, the Hebrew Doctor confessed himself vanquished, and immediately cut off his finger and sent it to Wazon, to hold until he should reclaim it as a thing which belonged to him. However, this may be the superiority of the Jewish physicians over other physicians, was so generally

<sup>\*</sup> Revolution de la Medicine, chap. ii, § viii. † Anselmo, chap. 88. ‡ Chronologie historique des eveques et princes de Liege, An. 1042.

recognised, that Huarte, one of the best minds that the Spanish nation has produced, has endeavoured to prove, that by the galenical theories, their temperament is that which was most adapted to medicine. The subtilties on which he founds his opinion, says Cabanis,\* fail to convince of its truth, but it is very certain that even at his time, the most sought for, and probably most skilful physicians were Jews.

In fact, the Jewish physicians were well received, not only in the palaces of the Musselman and the Christian princes, but even popes and prelates had them in their service, notwithstanding the canons which declared that no Jew could be permitted to be a physician, or to administer remedies to a Christian, as we will see in a future part of this work.

That which is particularly deserving of praise in the Jewish physicians, is their having founded the plan of medical teaching at Montpelier, which was the cradle of the celebrated Faculty of this city. All the histories agree in this glorious fact, but no one of them informs us of the precise epoch, nor the gradual progress. We shall attempt to give both in this place.

The origin of the city of Montpelier was as early as the ninth century. At that period the Israelites had schools in many of the towns of Languedoe and Provence, particularly at Arles, and Narbonne about the year 1000.

This last school was under the presidency of the Doctor Rabbi Abou, grandfather of the learned Moses ha Darschon. Religion was the principal object of instruction, but medicine was not neglected. One of his disciples whose name has not been preserved by history, but who has transmitted the title of a medical work which he had composed, resided at Montpelier, about the year 1025,† and is probably the founder of the medical school of that city.

Teaching was conducted there as in the school at Salernum, in Hebrew and Arabic, and a remark made by Salisburi, Bishop of Chastres, who lived in the twelfth century, that those who came from this school were full of barbarous words, proves that even

<sup>\*</sup> Revolution de la Medicine, chap. ii, §. vi.

<sup>†</sup> JEMOTH OLAM, MSS. of our Library, No. 83.

The Greek was rarely learned there, and the physicians of that city who descended from the Israelites, made use in the first place of the Arabic and the Hebrew, and subsequently of the Provencal and Latin, which we find used in the translations of the twelfth century. Whoever he may be, this unknown physician taught medicine at Montpelier, and his disciples who continued his course of studies, had a powerful influence in inspiring Christians with a desire of learning. As regards the work of our doctor it is referred to under the title of Book of Medicine, by Nathan ben Jechiel of Rome,\* by Solomon ben Isaac of Troyes,† and by Eleazar ben Nathan of Margence,‡ all authors of the twelfth century.

### § XXV.

#### EBN DJANAH.

While the Jews of France evidenced so much zeal in the cultivation of medicine, and by their labors had made the school of Montpelier the centre of medical sciences, Jewish Spain witnessed the advent of a great physician, in the person of Abou l'walid Merwan Ebn Djanah.§

This celebrated man who bore the Hebrew name of *Ionah* ben Ganach, is distinguished as one of the most profound grammarians produced among the Jews. He was born at Cordova, but took up his residence at Sarragossa, during the wars which desolated his country.

While yet a young man, his predilection for the study of the Holy Scriptures, attracted him to the school of the Hebraists. He soon made the acquaintance of the best works of the Hebrew grammarians, particularly of the celebrated Iehuda Chaioug. Having found many defects in the writings of this great man, he criticised them in a work of so profound a character, that the illustrious Samuel ha Naghid deemed it necessary to defend the work against his attack. But Ebn Djanah replied immediately

<sup>\*</sup> Sefer Aruch. s. v. Chatan. † Commentaire, Juges. ‡ Sefer Raben, p. 122. § Ebn Abi, Osaiba. Hist. des Medecins, chap. XIII.

by a second work, which was succeeded by three others on the same subject.

Agreeably to the custom of the times, these works were written in Arabic, and it appears that none of them have been translated into the Hebrew or any other language. Not so in regard to his Hebrew Grammar, which was translated into Hebrew by the physician Iehuda Ebn Tybbon. On account of these various writings on the Hebrew tongue, Ebn Djanah held one of the highest places among the most ancient Hebraists of Spain.

These very learned and curious works have remained up to the present time in manuscript, as also his book on Simple Medicines, which has been quoted with great praise by Ebn Abi Osaiba. We pass over in silence his philosophical works, and will content ourselves with saying, he has written against the eternity of matter. As regards the history of his life, we only know that he lived at the beginning of the eleventh century, and died about the year 1068. Ebn Djanah was one of the colleagues of the learned astronomer and physician Jehuda ben Dekufa,\* or as he is called by others, Isaac ben Dekufal.† He practised the profession of medicine with distinction, but we are not informed if he has left any work on the healing art.

It is probable that we should rank among the Spanish physicians of the eleventh century, Joseph ben Zebed, † a philosopher and physician, who should not be confounded with Rabbi Joseph ben Zabedeh, a celebrated poet in the Tackemoni of Charizi. He was allied in the bonds of friendship with Abdel Melek Eb Zohar, son and pupil of a physician, who flourished at Penaflor near Seville. This last physician distinguished by his science, united with it a modesty but seldom found. All his children were imbued with a taste for the sciences; but one only, the celebrated Abou Merwan Ebn Zohar, of whom we shall speak afterwards, was educated in the art of healing.

<sup>\*</sup> ABRAHAM BEN CHIJA, Sefer ha Ibur, 11, 8.

<sup>†</sup> Israeli, *Iesod Olam*, iv. 7. Compare Assaria de Rossi, *Meor Enaïm*, xl, p. 129.

<sup>‡</sup> Hebrew MSS. of the Royal Library of Paris. ancien fonds, No. 245.

<sup>&</sup>amp; EBN ABI OSAIBI, l. c.

# § XXVI.

# ABOU SAID, ISAAC AL BAGDADI. ASAF.

The reputation that the Jews had acquired in medicine in the eleventh century was a remarkable circumstance. We find their physicians established at that period in all countries, Christian as well as Musselman. In Germany, in France, in Italy, in Spain, in Egypt, every where the Jewish physicians were held in high repute. To the distinguished men we have already noted, we will add another, Abou Said Ebn Hosain, surnamed El Thalib, who flourished in Egypt about the year 1070. This is probably the same Abou Said, son of Abou Hosain, son of Abou Said, a Samaritan doctor, who is the author of an Arabico Samaritan version of the Pentateuch, which he undertook with a view of making a substitute for the Arabic version of the celebrated Saadia Gaon, which is used by the Samaritans. In some marginal notes Abou Saad criticises many portions of the version of Saadia, and gives the reasons which have influenced him to give a different translation of the text.\*

However that may be, Abou Said Ebn Hosaïn, has written a compilation on the diseases of the human body, and the means to prevent them, a work which is preserved in MSS. in many of the public libraries.

Another physician, Isaac of Bagdad, composed about the same time, a medical work, which bears the title of Adoniat el Mofredat, on the simple medicines. This physician practised his science at Bagdad with great reputation. He is generally known under the name of Ben Amran,† and is considered to be that one of the oriental Jewish physicians who has exerted the greatest influence over the healing art during the eleventh century.

But let us bring into view before finishing this epoch, a Jewish physician named Asaf. He was a historian and philosopher; he published a book on medicine, entitled Sefer Refuoth, the manu-

<sup>\*</sup> See our life of Saadia Gaon, p. 21.

<sup>†</sup> See D'HERBELET, Bibliolthèque Orientale, word Amran.

script of which is found in many of the public libraries of Europe. He among physicians, is the best known to the European Rabbis, because he wrote his work in Hebrew. They often quote him,\* and from these quotations we discover that the work contains historical notices which merit to be more extensively known, although many of them may be fictitious.

# § XXVII.

# MESCHULAM THE PHYSICIAN, RASCHI.

We now arrive at the great literary age of the Hebrews; a study as vast as it is interesting opens before us. Almost all the arts and sciences were cultivated with success. Among them were found at the same period great theologians, great philosophers, great mathematicians, great astronomers, great jurists, great poets, and also distinguished musicians. This happy age also produced many celebrated physicians.

France presents to us the first, with titles as numerous as they are imposing. The name of Meschulam, the physician, is not without merit in the eyes of the medical muses. He was probably of the Montpelier school, from whence he came, doubtless to Troyes in Champagne, the residence of Raschi; for the latter states that he is indebted to him for an explanation of some part in his commentary on the Holy Scripture.† Be that as it may, it is certain that Meschulam flourished in France at the beginning of the twelfth century, and that he knew Raschi personally, or as was his entire name, Rabbi Saloman ben Isaac.

This remarkable man possessed in the highest degree, those distinctive literary marks, which in the annals of all nations characterize the great literary geniuses, and make them the living type of an epoch. This it is which immortalizes their memory as a symbol of the eternal principles which they have taught, and of the imperishable works which they have left to

<sup>\*</sup> See Elieser, ben nathan, Sefer ha Raben, p. 53. Mosch ben Nachman, Schaar ben Ghemul p. 17; Aldabi, Schebilie Emuna, p. 117, &c. † Job, vi. 7.

29th of Tamuz, 4968 of the creation,\* which corresponds with July 1108 of the common era, at the age of sixty-five years. The French who reverence his merit, style him generally the prince of commentators, and this title is justified by the eulogies which the savans bestow on the great erudition of his commentaries, in which he has discoursed of the various sciences on established principles. It is thus that in his commentary on the Talmud,† Raschi informs us, how to perform the Cæsarian as a substitute for natural delivery, he, besides, quotes the medical work of the founder of the school of Montpelier, as we have already had occasion to remark. If we can credit the author of the Rabbinical library, he has also written a Sefer Refuah, book of medicine which was never published.

# § XXVIII.

#### EBN ZOHAR.

While France boasted of her great man Raschi, Spain on the other hand attained the highest point of literary and medical glory. To name Abou Merman Ebn Zohar, is to designate the physician par excellence, of the twelfth century.

\* Hebrew MSS. of the Royal Library of Paris, ancien fonds, No. 3, p. 344. "The ark of the Lord was taken, he is the saint of saints, the profound sage, the great master, our Rabbi Solomon, son of the holy Rabbi, Isaac the French, of happy memory, in the year 4868, on Thursday, 29th day of the month of Tamuz, at the age of sixty-five years, &c." This inscription which decides exactly the epoch of Raschi, is found both in one of the manuscripts of De Rossi, as he has translated it in his catalogue and in his historical dictionary; he has erred only in confounding the chet, which denotes 8 with the he, which marks 5, a mistake very natural, from the resemblance between those letters, but which can easily be rectified by the calendar, by which it appears that the 29th, Tamuz 4868, and not 4865, falls on Thursday. From this observation it becomes necessary to correct the biographers of Raschi, even including doctor Zung, who nevertheless prides himself on being very accurate on this chapter, and who in giving a long list of writers who are in error on this point, has forgotten to include the doctor himself in their number.

<sup>†</sup> Traite Nidda, chap. iv.

<sup>‡</sup> EBN ABI, OSAIBA, l. c. LEO AFR. ibid, p. 279; ANTON, Bibl. vel. Hisp. t. II. p. 232; CASTRI, Bibl. Arab. Hisp. Esc. t. II. p. 132.

Born at Peneflor about the year 1070, his father Abd-el Melek began to instruct him in medicine at the early age of ten years. After finishing his medical studies at Seville with great credit, his father made him take an oath, never to employ poison. This oath while it surprises us, yet shows to what extent poisonings were increased among the Saracens.

Ebn Zoher had practised for some time his profession, when he was appointed physician to Ali ben Temin, king of Seville. He devoted himself with great zeal to the duties of his station, and cured the brother of his master who had been poisoned by his own family, but the offended relatives persecuted him with imprisonment, and kept him a long time in prison. Singular return on the part of this vindictive family, for having saved the life of one of its members. Ebn Zohar yet languished in prison, when Joseph ben Tachefyn, prince of Morocco, drove Ali with the other petty tyrants, from Spain. He recovered his liberty, and entered the service of this generous prince, who heaped upon him riches and honors. Having been complimented with a medical chair, he taught this science for a long period, and contributed to spread among the Arabs the true science of medicine. He was the preceptor among other distinguished physicians, of the celebrated Ebn Roschid, better known by the name of Averroes, and of his son of whom we shall speak afterwards. The constant demands made by his professional labors on Ebn Zohar, did not prevent him from devoting his moments of leisure to literature, a taste for which he had imbibed in the brilliant society of his father and grandfather. He was in continual correspondence with the most renowned physicians of his time, who regarded him as a second Hippocrates. He was in truth a great observer of nature, and profoundly learned, was perfect master of the Hebrew, Syriac and Arabic languages, and had no less talent for poetry than for prose, he was honored as a sage during the fourteenth century.\* By his temperance and strength of constitution he was enabled to live to extreme old age, without having ever suffered any other disease than that which terminated his days, in the 557th year of the Hegira, (1161st of the common era,) at the age of ninety-two years.

# § XXIX.

#### THE WORKS OF EBN ZOHAR.

"In order to arrive at a profound knowledge of medicine," says Ebn Roschid, somewhere, "it is necessary to read carefully the works of Ebn Zohar, which are the real treasure of the art. He knew all that is permitted to man to know on these subjects, and we are indebted to his family for the true science of medicine." Among these works we will first refer to the book entitled Teissir, in which he points out the remedies and regimen adapted to a majority of diseases, next a Treatise on the Cure of Diseases, and two Treatises on Fevers. The first which he prepared for his master, prince Joseph Tachefyn, is found in manuscript in the Royal Library of Paris, and the Bodlein Library. In it is found a great number of anecdotes of his life. It has been translated from the Arabic into the Hebrew, and from this last language into the Latin. The second, which he dedicated to Ibrahim, son of Joseph ben Tachefyn, has likewise been translated into Hebrew. The two last were translated into Latin, and printed at Venice in 1570.

These books, particularly the *Teissir*, are full of researches as interesting as they are instructive and curious. Ebn Zohar has distinguished with great accuracy the laxatives and purgatives, and he has almost entirely rejected them from use. His principles very often differ from those of Galen, as Sprengel very well remarks.\*

His ideas on the cause which preserves life, and the regular mixture of the humours, notwithstanding their tendency to putrefaction, are so much the more deserving of attention, as in this respect they appear to have laid down the path for the celebrated Stahl. He reports an interesting case of a cure of phthisis,

<sup>\*</sup> Versuch einer pragmatischen Geschichte der Arzneikunde, t. II, p. 437.

effected by his grandfather, by means of the sugar of roses alone. The use of the bezoar\* cured the high constable of the caliph of Seville, of a jaundice, the consequence of poisoning. describes phthisis, produced by ulceration of the stomach, as a new disease. The case which he has reported of a disease caused by a tumor of the stomach, is truly remarkable. studied, and it is a fact of great importance, inflammation of the mediastinum, with which he himself had been attacked. We cannot too highly value his remarks upon inflammation of the pericardium, and upon angina, produced by paralysis of the æsophagus. He proposed to treat this last affection with gargles introduced through a long tube. We also read with pleasure, his observations upon an aphonia caused by schirrous enlargement of the tongue, and upon the little danger attending the entire loss of the womb from suppuration of this organ. He has very correct ideas on the influence exerted by marsh exhalations over health. We note as a remarkable fact, that he bled his own son only three years of age, with complete success.

\*The bezoar, or morbid concretion formed generally in the stomachs and intestines of animals, possessed at one time a great reputation as an antidote to poisons. The most esteemed among the Oriental bezoars were obtained from the stomach of the goat and gazelle. These substances were worn as ornaments, and much esteemed, but are of no value in resisting poison, as was proved by the experiment made by Ambrose Parè, at the command of Charles IX, on a criminal, to whom he had given corrosive sublimate. The general impression of its value is beautifully alluded to by a modern poet.

"That miraculous gem, the gem that gave A sign infallible of coming ill,
That clouded, through the vehicle of death,
Were an invisible perfume."

Rogers' Italy, part I.

# BIBLIOGRAPHICAL NOTICES.

#### MEDICAL STATISTICS OF THE UNITED STATES ARMY.(1)

"The following pages are devoted to the investigation of the comparative influence of various systems of climate upon the organization of man—a subject which engaged the attention of the father of physic himself, in his treatise on 'Air, Water, and Situation.' The medical literature of almost every country abounds with medico-topographical descriptions of particular localities; but the mere accumulation of facts of this kind, unless systematically arranged, can avail but little in determining the operation of physical causes upon the human constitution. In observing the phenomena of nature, the view of the individual practitioner is here restricted to narrow boundaries; and as these various and complicated facts have been but partially generalized, the laws of nature in regard to these external influences upon the healthy and diseased condition of man are often sadly misinterpreted.

"For the period of twenty years, quarterly reports of diseases among the regular troops have been uninterruptedly made to the Medical Bureau of the United States Army; thus affording the means, in connexion with the returns in the Adjutant General's Office, not only to investigate morbid action by the numerical method, but to show its relation with climate. As these diversified facts admit of classification according to certain geographical limits, the results, it is hoped, will furnish some general laws towards the basis of a system of medical geography.

"This report consists of a collection of facts in relation to the medical topography of the military posts, and the vital statistics of the troops extending over a period of twenty years. The general conclusions have been arrived at through a process of statistical investigation, and the accompanying remarks are the result of the experience and observation of individuals whose official duty it was to study the local features of certain regions, to investigate the causes of their diseases, and to analyze and describe them.

"The diseases incident to armies present an extensive field for observation. The advantages offered in the Revolutionary war, and in our second struggle with

<sup>(1)</sup> Statistical Report on the Sickness and Mortality in the Army of the United States. Compiled from the records of the Surgeon General's and Adjutant General's offices—embracing a period of twenty years, from January, 1819, to January, 1839. Prepared under the direction of Thomas Lawson, M.D. Surgeon General. Published for the use of the Medical Officers of the Army of the United States, 8 vo. pp. 350.

Great Britain, were but slightly improved. Excepting the 'Medical Sketches' of Surgeon Mann, and a few remarks interspersed in the works of Dr. Rush, we are almost entirely ignorant of the medical history of these two eventful periods. Military hygiene—the knowledge of maintaining the health of soldiers, and of promoting their efficiency—is another subject which should not only be carefully studied by medical and all other officers, but receive the special attention of Government.

"In the arrangement of these statistical materials, the subject has been divided into two parts, each embracing the period of ten years. In the former, the numerical mode of investigation, in default of the requisite data in regard to the mean strength of each post, prior to 1829, is carried out only in part; but in the latter period, all the advantages afforded by this method of analysis has been realized. The extent of labor in preparing these papers may be inferred from the single fact that it was necessary to examine about 4,000 quarterly sick-reports, (a majority of which have been condensed into abstracts,) and to obtain from the Adjutant General's Office the mean strength for corresponding periods, compiled from the post and regimental returns.

"In the brief topographical descriptions of the posts, due allowance will be made by those having the personal knowledge derived from a residence at a station, for the difficulty attending a compilation from statements made by different individuals and at different periods. As this report exhibits a condensed view of the labors of the majority of the medical officers belonging to the army for a period of twenty years, it is impracticable to acknowledge the collator's obligation to each one individually. He, therefore, avails himself of this opportunity of expressing to them generally his indebtedness for the valuable data afforded by their quarterly reports. To the late Surgeon General, much credit pertains for having organized a system of returns, rendering it feasible to condense the results of so long a period into the form now presented.

"Surgeon General's Office, April, 1840."

A most excellent work, for which the profession are placed under obligations to the Surgeon General of the United States Army. It appears to be the commencement of a series of such works on the same subject, and of the same character, which we hope the intelligent gentleman at the head of the Medical Department of the Army, may be able from time to time to give to the medical public. The introduction given above will give an idea of the nature of the work, and the amount of labor necessary to prepare it.

# PHYSIOLOGY AND ANIMAL MECHANISM.

BY W. S. W. RUSCHENBERGER, M.D., U. S. ARMY.(1)

A VERY valuable contribution to that class of works which are at the present issuing from the press, for the use of schools and colleges. We feel assured it will be found both useful and entertaining. With such views of its merits we commend it to the favor of those who have charge of the instruction of youth. We here insert the Preface to the work, and Table of Contents, that our readers may at a glance understand more fully its character.

"PREFACE.—The original text of this volume forms the first of a series of FIRST BOOKS ON NATURAL HISTORY which were arranged and published by men distinguished in science, under the direction of the 'ROYAL COUNCIL OF PUBLIC INSTRUCTION OF FRANCE,' for the Use of Schools and Colleges of that country. These First Books or Primers are seven in number, and embrace the following subjects, each complete in itself.

- "No. 1. General Notions on Physiology, and Animal Mechanism.
  - No. 2. Zoology, or the Natural History of Mammiferous Animals.
  - No. 3. ORNITHOLOGY, or the Natural History of Birds.
  - No. 4. The Natural History of Reptiles, Fish, and Molusca.
- No. 5. The History of Insects, of the Crustacea, Arachnides, Anne-LIDES, and ZOOPHYTES.
  - No. 6. BOTANY; and
  - No. 7. GEOLOGY.

"The great care which has been bestowed in the preparation of these Primers, and their almost unparalleled popularity in France, hundreds of thousands having been sold in the course of a short time, has led me to offer to the public, the first of the series: should this little work be favourably received, the other Primers will be prepared in a similar style and offered to the American public.

"The work does not pretend to be more than a mere outline; and is chiefly designed as an introduction to the study of natural history; but it treats sufficiently of Physiology and animal mechanism, to be well adapted to the use of schools, as well as for young persons, and even others who have not the opportunity or inclination to study the subject in professional treatises. Each branch of the subject is treated of in as few words as perspicuity will permit. The reader is led on from point to point, and is informed in the progress of the work of all that is requisite to enable him to understand generally, the phenomena of the circulation of the blood, respiration, digestion; and the structure, and mode of operation of the several senses, are clearly set forth.

"One considerable objection to the several highly meritorious works which have been, within a short period, presented to the public on popular physiology,

(1) First Book of Natural History, prepared for the use of Schools and Colleges. By W. S. W. Ruschenberger, M.D., Surgeon in the United States Navy; fellow of the college of physicians; honorary member of the Philadelphia Medical Society; member of the Academy of Natural Sciences of Philadelphia; &c. &c. From the text of Milne Edwards, and Achille Comte: professors of Natural History in the Colleges of Henry IV, and Charlemagne, with plates, 12mo. pp. 113. Philadelphia: Turner and Fisher.

namely, the price, being too expensive for general use in common schools, has been obviated in this.

"In order to render this little book more complete for the use of schools, I have added, at the foot of each page, questions upon the text, which in many instances serve to illustrate it, and also a short glossary of such words as are used in a technical sense. When the character of the plates, and the matter of the work, are taken into consideration with the very small sum for which it is afforded, it is hoped, it will meet with a proper reception.

"PHILADELPHIA, June 1, 1841."

"CONTENTS.—Lesson I. The Natural Sciences and their Divisions.—Definition of Zoology.—General knowledge necessary to its successful study. The Structure of animals and enumeration of their principal organs.—Classification of the functions of animals.

"Lesson II. Functions of Nutrition.—Nutrition of Organs.—Proof of the existence of the Nutritive movement.—Coloring of bones.—The blood is the principal agent of Nutrition.—Use of the blood.—Study of this liquid.—Physical properties of the blood.—Red and white blood.—Globules.—Serum.—Coagulation.—Venous and arterial blood.—Transformation of Venous into arterial blood by the action of the air.

"Lesson III. Functions of Nutrition.—Circulation of the blood.—The heart.—Arteries.—Veins.—Motion of the blood in the bodies of the Mammiferæ.—Mechanism of the circulation.—Phenomenon of the pulse.—Venous absorption.—Secretions.

"Lesson IV. Functions of Nutrition.—Respiration.—Necessity of contact with the air.—Asphyxia.—Composition of the atmosphere.—Principal phenomena of respiration.—The lungs.—Mechanism of respiration.—Animal Heat.

"Lesson V. Functions of Nutrition.—Digestion.—The mouth.—The prehension of aliments.—Mastication.—The teeth; their structure; the manner of their formation; their form and use.—Saliva.—Salivary glands.—Deglutition.—Pharynx.—Œsophagus.

"Lesson VI. Functions of Nutrition.—Stomach digestion, or chymification.—Intestinal digestion or chylification.—The bile.—The liver.—The pancreas and pancreatic juice.—Large intestine.—Chyle.—Chyliferous vessels—Recapitulation of the Functions of Nutrition.

"Lesson VII. Functions of Relation.—Nervous system and sensibility.—Brain.—Spinal marrow.—Nerves.

"Lesson VIII. Functions of Relation.—Sense of touch.—The skin.—Hands.—Hair.—Beard.—Nails.—Horns.—Mode of formation.—Sense of smell.—Olfactory apparatus.—Sense of taste.—Sense of hearing.—Auditory apparatus.

"Lesson IX. Functions of Relation.—Sense of sight.—Light.—Apparatus of vision.—Eyebrows.—Eyelids.—Lachrymal apparatus.—Muscles of the eye.—Structure of the eye.—Uses of the different parts of the eye.—Voice.

"Lesson X. Functions of Relation.—Apparatus of motion.—Skeleton.—Structure of bones.—Their composition.—Enumeration of the bones.—Articulations or joints.—Muscles.—Attitudes.—Locomotion.

#### OBSERVATIONS ON ERGOT,

#### BY PROFESSOR BECK.(1)

THE Profession has not yet come to a conclusion upon the long mooted questions concerning the powers of ergot, therefore, Dr. Beck's Essay is interesting as a summary of valuable information, with regard to this singularly effective drug.

Dr. Beck assumes, as established by experiment, that ergot does possess a power of exciting uterine contraction, and thus facilitating delivery; and he accounts satisfactorily for the frequent failures which have been noticed in its use.

"Now, that ergot has frequently been given without producing any effect on the uterus is readily admitted, and yet this by no means proves that it is destitute of the power ascribed to it. Some constitutions are doubtless not susceptible to its action. This we know to be the case with many agents, whose action on the human system is universally acknowledged. Besides, much of the alleged inefficacy of ergot may very readily be explained by the fact, now well known, that this article is not always precisely the same. From a variety of causes influencing the growth of this curious substance, independently of designed sophistications, it has been established that its properties differ very materially, and if these be not duly regarded, it is by no means wonderful that its use is frequently not followed by any effect."

"In the first place, the character of the season, as to dryness or moisture, appears to influence very materially the quality of the ergot. According to Burnett, it has been ascertained that the principle of the ergot resides in the diffluent peridium or external covering. Now if heavy rains fall at the time when the peridium is soft and moist, it will be washed away and the hardened nucleus, if wholly denuded, will be utterly inert. If the weather be fine during the maturation of the fungus, the diffluent peridium will be dried upon the spur, and the ergot be in its most active state. Hence it is, that although moisture favors the early growth of the ergot in the spring and summer, it requires a dry autumn to ensure its activity."

"In the second place, the period when it is gathered has an influence on the character of the ergot. According to the experiments of Dr. Kluge of Mendelurtz, it would seem that it only displays its active properties, when collected before the cutting of the parent crop. At the Maternite of Mendelurtz, trials were made upon fifteen females, and the result was, that what was gathered before harvest was very energetic, while that collected after harvest was altogether powerless. Whether this be true in its full extent or not, certain it is that there is a great difference in the strength of the article, according to the time when it is gathered. A recent writer, Dr. Green, who states that he has used it in nearly one hundred cases, says that when gathered from the standing grain, and about the period when it is ripe for the harvest, he has found it not only more certain in its action, but, 'in doses of eight or ten grains, to prove as efficient in increasing the

<sup>(1)</sup> Observations on Ergot, read before the Medical Society of the State of New York, February 3, 1841. By John B. Beck, M.D., Professor of Materia Medica and Medical Jurisprudence, in the College of Physicians and Surgeons of New York. Albany, 1841.

uterine powers, as the scruple or half drachm doses of the ones obtained in the ordinary way."

Again, he says, it loses its power by age, and is often adulterated.

Having premised these observations, Dr. B. examines the important question: Does ergot produce any effect upon the child?

This is a very serious question, and one about which every physician should satisfy himself, as soon, and as certainly as he can. If ergot can be used with entire safety to the child, it is an invaluable agent, and one which may be used with great success in curtailing the terrible suffering of labor, but if it is dangerous to the child, it is one of the most murderous articles of the materia medica.

We invite the attention of our readers to the following facts, which are abundantly sufficient to make us reluctant to use ergot, except in cases of extremity.

"Dr. Ward of New Jersey, whose experience with this article appears to have been extensive, and who speaks of it as a valuable agent in many cases, nevertheless admits the danger which attends the child from its use. 'In all the cases,' he says, 'in which I have given it, unless the child was expelled very soon after the powerful contractions came on, it suffered very much, and would lie for some time without breathing.' Again he says, 'from my own observations, with regard to the ergot, as well as from other correct sources of information, I am led to conclude that in most cases, after giving it, unless the child is expelled in forty minutes after the powerful contractions come on, it will be born dead.'"

"The late Dr. William Moore, a veteran practitioner of obstetrics in this city, after detailing some cases, gives his opinion in relation to ergot in the following terms: 'It appears to be injurious to the child at all times; for in every case in which I have seen it exhibited, the child has been stillborn, and in the greater part of them it was not possible to restore it to life.'"

"Dr. Hosack states that he gave the ergot in three cases, and 'although no evidence existed previous to the use of the medicine, that the fœtus was not living, in every case in which it was administered, the child was stillborn."

"Dr. Chatard, of Baltimore, made two reports in relation to the effects of ergot. In the first, out of twelve cases in which it was given, six of the children were stillborn. In a second report, out of twenty-five cases, eight were stillborn, two of whom were however resuscitated."

"Dr. Holcombe, of New Jersey, says, 'more children, I am satisfied from what I have seen and heard, have already perished by the injudicious use of ergot, during the few years which have followed its introduction into the practice of this country, than have been sacrificed by the unwarrantable use of the crotchet for a century past."

"Dr. Church, in seven cases, which he details, in which the ergot was used, had five children stillborn. Although he thinks that in these cases the ergot had nothing to do with this result, yet he confesses that he has no doubt if given in cases where there is great rigidity of muscular fibre, before the labor is advanced, when the os uteri is undilated, the external parts unrelaxed, and when bloodletting has not been premised, that the powerful and continued efforts of the uterus, caused by the ergot will prevent the retreat of the child's head after it has advanced within the bones, and that the unceasing pressure may in some instances occasion death."

"Dr. Davies, of London, reports ten cases in which the ergot was used. In four, the child was stillborn. In a fifth, the child was apparently stillborn, but soon recovered. In all the stillborn cases, it appears that the child was not delivered until upwards of an hour had elapsed after the administration of the ergot. In the first, two hours elapsed; in the second, a little more than an hour; in the third, six hours; in the fourth, a little over an hour."

"Mr. T. Chavasse, of Birmingham, states that in eighteen cases in which the ergot was used, the children were stillborn."

"Mr. Jukes, of Birmingham, says that out of six cases in which he used it, five of the children were stillborn."

"Mr. P. H. Chavasse reports nine cases in which its use was followed by the birth of stillborn children, and in all before he administered the ergot, there was every indication of the children being alive."

"Mr. Elkington says that 'several of his patients who took it, had stillborn children.'"

"Mr. John Paterson, of Aberdeen, used the ergot in eight cases, and in three the children were stillborn—'than which,' he says, 'no stronger evidence need be adduced of its extreme danger.' In the three cases alluded to, he states, that he satisfied himself before its administration that the children were not only alive, but apparently strong and healthy; but as soon as the action of the medicine commenced, these impressions became gradually less sensible to himself as well as to the mother. And he adds his doubts whether by the use of this article more deaths are not occasioned than by the use of instruments.'"

With these facts before us, we are inclined to adopt the opinion of Dr. Perkins, as expressed in the following letter:

"NEW YORK, January 14th, 1841.

"My Dear Sir:—After what I considered a fair and full trial, I formed an opinion on the use of ergot, twenty-five years ago, and one which has governed me in practice ever since. I consider it a valuable article of the materia medica, to be used with great caution and only in cases of clear necessity. I have reasons satisfactory to my own mind for believing that it has frequently destroyed fætuses and produced sterility in mothers. Entertaining this opinion I am surprised to see by some late publications that this article continues to be resorted to by some practitioners under very trivial pretexts. I mean on occasions where, to say the least, it is totally unnecessary. It hastens labor, it is true, but I entertain so high a respect for the intelligence of nature, that I consider this hazardous method of bringing a child into the world before its time, as little better than sending it out before its time.

Yours truly,

Professor J. B. Beck.

CYRUS PERKINS."

A physician is inexcusable who uses ergot unnecessarily. He has no right to jeopard the life of the fœtus, in order to relieve the mother from pain, or himself from protracted watching by the bed side. The greatest virtue of an accoucheur is patience; if he has a sufficient stock of this, he will rarely need ergot or instruments. Has ergot any power over the uterus anterior to the full term of gestation? This is another important question, and this too, Dr. Beck settles in the affirmative, by abundant evidence. Our limits will not permit us to quote much

of the testimony he adduces; but we invite the attention of our readers to the following:

"The most satisfactory testimony, however, on this subject, is that which has been furnished within a few years by several British physicians. In 1834 Dr. F. H. Ramsbotham, of London, detailed six cases, in which it was necessary to induce premature labor, and in all it was successfully brought about by the use of the ergot. In the first case the pregnancy had advanced to eight months; in the second to seven and a half; in the third to seven and a half; in the fourth to seven and a half; in the fifth to eight; and in the sixth to seven and a half months."

"In a subsequent paper, Dr. Ramsbotham has given an account of his practice in those cases in which, from the narrowness of the pelvis, he was obliged to resort to the induction of premature labor. Of these he states that in all he had had sixty-two cases. In thirty-six cases the membranes were punctured, and in twenty-one of these the children were born alive, and sixteen were stillborn. In twenty-six the labor was induced by ergot, without any other means being used; of these, twelve were born alive and fourteen stillborn. Besides establishing, beyond all doubt, the fact that ergot is capable of exciting the uterus into action anterior to the full term, this report is important in another respect, and this is particularly noticed by the author. It is that the number of stillbirths in these cases was much greater in proportion in those in which the ergot was used, than in those in which the practice of puncturing the membranes was resorted to. Dr. Ramsbotham adds the remark, that he has seen the stimulating effects of ergot on the uterus in numerous cases of dangerous hemorrhage in the early months, when it was desirable to procure a complete evacuation of that organ, and where no manual or instrumental means could be put in practice."

The concluding remarks of Dr. Beck, are worthy of remembrance.

"IV. To what extent are we justified in using ergot? If there be any truth or force in what has been said in relation to the effects of this article on the child, the answer to this question is obvious. In a professional as well as moral point of view, we have no more right to trifle with the life of the child than we have with the life of the mother. When, however, from the nature of the case, it becomes manifest that the life of the mother is in danger, we are not merely justified in using, but it is a positive duty to do so, every means to save her, disregarding every consequence that may result to the child. Now it is for such contingencies that I conceive that ergot ought to be reserved. It should accordingly, I think, never be used except in cases where nature is incompetent to a safe delivery. By too many, it is to be feared, it has been and still is used merely as a time-saving agent. Than this, I cannot conceive of any practice more unjustifiable and reprehensible. As a general rule, nature is competent to a safe delivery, and we may rest assured that the best plan is to leave her alone to accomplish the work. Artificial and violent interference, whether it be applied in the shape of instruments or by the use of ergot, cannot but be improper."

### PROFESSOR BECK'S VALEDICTORY ADDRESS.(1)

Good advice is never impaired by age, and therefore we are glad to see Dr. Beck's address, though delivered some time ago. It is a plain and excellent address, containing a great many sound and useful remarks, and we trust that the young men for whom it was written have profited by it. Dr. Beck urges upon his hearers the importance of a well disciplined mind: which he defines to be "that intellectual cultivation which is the result of study and training, upon a mind capable of improvement." He shows that it is folly to rely upon the excellence of natural talent, for success in any department of science, and adds his testimony to the aggregate experience of all ages, in confirmation of the truth, that industry is the greatest of all talents. We wish that more lecturers would take pains to convince young men of this important fact, that intellectual strength will no more provide food for the mind without labor, than physical strength will for the body.

Dr. Beck's remarks upon preliminary education are just and important.

Education is but the preparation for study. It ought to be the business of teachers to strengthen the mental powers of children, not to cram them with a little of every sort of knowledge. We fear this truth is but little understood by "the professors of academical institutes, &c. &c. who figure in our day." We thank our stars that we were fortunate enough to get through our pupilage before botany, and minerology, and philosophy, and anatomy, and chemistry, were familiar words in the nursery; before schools were institutions, and teachers professors.

Dr. Beck urges upon the graduates the necessity of continuing to study, if they would be useful and successful. Upon this subject we quote his own words.

"Not merely, however, ought the student who aims at distinction to have his mind properly disciplined by general studies; but he ought to aspire to the character of a man of learning in his profession. By this, I do not mean that he should be well versed in the mere elements of his profession. This may be accomplished without much difficulty, simply by the study of a few text-books. intended to save the student the labor of thought and inquiry. Important as this kind of knowledge undoubtedly is, it is not worthy of the dignified name of learning. When I speak of learning as applied to medicine, I mean, that a man should be extensively read in the best authors who have written on the various departments of his profession. He should not confine himself to the writers of one age, or one country, or one language. In a word, he should have ranged over the whole field of professional knowledge, as he finds it embodied in the recorded labors and researches, not merely of the present, but of past generations. It is only in this way, that he can justly hope to attain to the title of true learning. In pursuing this course, it is not necessary that every book should be read, or that all books should be read with equal care. Lord Bacon says, 'some books are to be tasted, others to be swallowed, and some to be chewed and digested;

<sup>(1)</sup> Valedictory Address, to the Students in Medicine of the College of Physicians and Surgeons of the University of the State of New York. Delivered, February 28, 1839. By John B. Beck, M. D., Professor of Materia Medica and Medical Jurisprudence in the College of Physicians and Surgeons of the University of the State of New York. New York, 1839.

that is, some books are to be read only in parts; others, to be read, but not curiously; and some few to be read wholly, and with diligence and attention.' No rule is deeper laid in common sense than this. Whoever has run over, with an attentive eye, and a discriminating judgment, any portion of professional literature, cannot but be forcibly impressed with the fact, that a large proportion of writers are the mere copyists of those who have preceded them. In a thousand different shapes and ways, the same materials are wrought up, to suit the existing taste of the day, without the addition of a single new idea. It is only now and then, and at immense intervals too, that a work of profound and original merit bursts upon the view. Now, the practised student, and the man of disciplined understanding, will, almost at a glance, be able to seize upon the true value of a book, and extract from it what may be essentially useful. In this way, a labor apparently endless and hopeless, comes within the reach of ordinary industry and capacity."

We quote the following remarks upon professional conduct. They are worthy of all commendation.

"Again, if you wish to acquire distinction, cultivate an enthusiastic love of your profession. Unless you do this, all your aspirings after fame will prove abortive. Independently of this consideration, you have every inducement to do so. Than medicine, there is no department of human labor which is more interesting in itself, or more generous in the ends which it proposes to itself. It ranges over the illimitable fields of nature—it looks to the heavens—it traverses the globe—it climbs the mountain—it dives into the solid earth—it interrogates man himself in his mysterious recesses; and it brings all its treasures to its votaries, for the noblest of purposes; to alleviate human distress—to arrest the progress of disease—to dispel the mists of clouded intellect—in short, to make man a happier and more grateful tenant of this lower world. If you entertain such views of your profession, it cannot be otherwise than that you will make corresponding efforts to add something to the amount of our knowledge and means to accomplish these sublime objects; and if you do so, you cannot fail to receive your reward.

"But it is not merely necessary that the man who enters our profession should love the science in the abstract; he must also respect his professional brethren. Our profession, like every other, contains a mixture of good and evil. There are some, who by their misdeeds, have forfeited all esteem. But all are not such. Our profession contains a mass of intelligence, and worth, and virtue, which he is bound to appreciate, if he ever hope to succeed. This he is bound to do, no less by the obligations of duty than from a regard to his own interest. He should recollect, that the character of the profession is a part of the inheritance of every individual member of it, and just in proportion as that is elevated or degraded, does the humblest individual who belongs to it rise or sink in importance. There are some so unfortunately organized, that they think the only method of gaining importance is by traducing others and rising upon their ruins. As you value your future respectability—as you value the opinion of the honorable and virtuous—and, above all, as you value your own peace of mind, do not emulate their vicious example. Retributive justice sooner or later overtakes such men. The victims of envy and jealousy, their whole moral nature becomes depraved to the core, and they become the prey of the unholy fires which themselves have kindled. As

they go through life, they cast a baleful influence around them, and at last they pass from the scene unhonored and unregretted. On the other hand, if you trust to your own merit—if y u give to all their due—if you cast the mantle of charity over their deficiencies—you will not fail to reap a rich harvest of grateful feeling from all around you."

#### DR. HARRIS' INTRODUCTORY LECTURE.(1)

An excellent Lecture, clothed in clear and simple style, well worthy the occasion that gave origin to it, and calculated to be alike useful to the Dental student, and the members of the profession generally. We are highly gratified to find on enquiry, that the prospects of the College are every way encouraging. We confidently anticipate for it full and entire success. The following extract from Dr. Harris' Lecture, will give our readers a brief view of the objects of the College.

"But to Maryland belongs the honor and credit of establishing the first institution that has ever existed, for the education of gentlemen for this particular department of medicine. The Legislature of this State at its last session incorporated a College for this special purpose, and thus, facilities are offered for the acquirement of a knowledge of all the branches of this most valuable art, that have never before existed, and in consequence of which, the majority of those who have assumed its practice, have been compelled to do so without the requisite preparatory qualifications. Had facilities for obtaining the necessary information existed, it is probable that most of those who have thus entered the profession, would have availed themselves of them; but as there were none, they were obliged to depend upon such instruction as they could procure, but relying principally upon what they should learn from practice. Thus, from year to year have numbers been added to the profession, until its ranks have become crowded with individuals totally unqualified to take upon themselves the exercise of its nice and critical duties.

"But a new era has commenced in this department of knowledge, and I am flattered with the belief, that the time is not distant, when it will be expected of the dental surgeon, as it now is of the medical practitioner, that he shall have been regularly educated for the pursuit, before he shall be permitted to engage in it. For a neglect of this, no good excuse can hereafter be offered. The establishment of the institution to which I have just referred, affords opportunity for obtaining instruction in all the branches requisite to an accomplished practitioner; and it may not be amiss to observe, that, possessed of ample means for doing this, it is the determination of those to whom its duties have been committed, to extend facilities for their acquirement, such as have never before been presented. Aware of the responsibility that rests upon them, the faculty will spare no efforts to make it creditable to the state that created it, and beneficial to the public.

<sup>(1)</sup> Introductory Lecture delivered before the Class of the Baltimore College of Dental Surgery, by Chapin A. Harris, M.D., D.D.S., Professor of Practical Dentistry; furnished for the American Journal of Dental Science, at the request of the Publishing Committee.

Conscious that its claims to respectability and usefulness will depend upon the manner in which they shall discharge their duties, it will be their constant endeavor to impart, not only correct, but thorough theoretical and practical information, persuaded that without this, it is impossible for any to practice the art with credit to themselves, or for the benefit of their employers, they are resolved to admit none to the honors of the institution except such as possess it. In short, they are determined that no reproach shall rest upon them for fixing a standard of qualification, that shall not at once be respectable, and entitle those coming up to it, to the confidence of an enlightened community. Whether their efforts will be sustained in a manner to justify their continuance, time only can determine. The importance of a knowledge of the subjects proposed to be taught by them, to the dental practitioner, would at least, seem to justify an affirmative conclusion, and that their labors will ultimately be crowned with success, they cannot but cherish a confident belief.

"That a school, established for the special purpose of teaching a profession whose resources are as frequently called into requisition as those of the dental surgeon, and upon the judicious and correct exercise of whose duties, the comfort and happiness of so many depend, should be suffered to go down, I can hardly suppose. A failure of the experiment, for as yet, it can be regarded as little else, would be a reproach upon the intelligence of our country. Therefore, that it will be sustained, I entertain no scruples. The announcement that was made of its establishment by the Board of Visitors, soon after its organization, was received, by the more intelligent of the profession throughout the United States, in a manner calculated, not only to inspire its friends with confidence, but also that promises perpetuity to it. That it will have many discouragements and difficulties to contend with, is to be expected; yet, if by the persevering exertions of those to whom its management has been entrusted, they be eventually overcome, and the objects for which it was created accomplished, they will feel themselves amply rewarded, for the time and labor which they shall have bestowed upon it."

As heretofore, so also now, we cherish a fraternal feeling for this Institution. We shall continue so to do, and yield it all the support in our power, so long as those to whose hands its interests are more immediately committed, conduct it creditably.

#### BOSTON MEDICAL AND SURGICAL JOURNAL.

This well conducted periodical is regularly received, and always meets with a most cordial greeting. We sincerely wish the worthy Editor, entire success in every particular, and assure him, it will afford us great gratification to place the weight of our influence, whatever it may be worth, at his disposal. This Journal for useful matter, and genteel appearance, will not suffer in comparison with any that comes under our notice.

#### AMERICAN JOURNAL OF DENTAL SCIENCE.

The double number for August and September of this excellent Journal is before us. We are gratified to find that its pages continue to be filled with matter creditable to its collaborators, and useful to its patrons. We perceive by the present numbers, which close the first volume, "that the future destinies of this Journal have been entrusted to the fostering care of the American Society of Dental Surgeons;" and that it will hereafter appear as a quarterly, at a cost of five dollars per annum, under the name of the "American Journal and Library of Dental Science." We hope these changes may tend to increase the value of the work, and render its perpetuity entirely certain. We should regret exceedingly to entertain even the most distant expectation of its failure. Its demise would be a calamity to the profession, whose immediate organ it is; the effect of which would also be felt more or less by the kindred professions.

#### THE AMERICAN JOURNAL AND LIBRARY OF DENTAL SCIENCE.

We had scarcely finished the foregoing notice of the American Journal of Dental Science, when the first quarterly number of its second volume, under the name at the head of this article, came to hand. Its appearance in new dress is highly creditable to the publishers and editors. As a specimen of typography it is unrivalled by any of the numerous Journals which come to us. From the hasty examination of its contents, which as yet we have found time to bestow, we are inclined to think the "matter" unsurpassed by the accompanying "dress." We would, however, here suggest to the worthy Editors, the propriety of inserting in the future numbers, shorter articles. We make this suggestion, not because those of the present number, are in our opinion valueless, but for the contrary reason. They are too valuable to be read only by a few, or hastily examined even by many, one or both of which results will necessarily be the case, with all articles of considerable length in any periodical.

The present number is enriched by a beautifully lithographic colored plate, from the drawing of a microscopic view of the internal membrane of a superior bicuspis, the history of which is given in a letter accompanying the drawing, and forwarded to the Baltimore Editor, by Mr. C. Brown, of Woolwich, Kent, England. This plate, independent of the value it has "per se," is worthy of very special attention, as a beautiful specimen of a new and highly useful improvement in lithography; introduced, it appears, into this country, by Weber & Co., lithographers of this city.

There is also in this number a lithographic likeness of our worthy personal friend, H. H. Hayden, M.D., President of the American Society of Dental Surgeons, from a drawing by R. Peale, in 1835. Although this likeness is in some respects very good, yet, we think it would have been better to have retaken it, as sixteen years have evidently not passed away without leaving traces of their effects in passing, upon the living original.

In conclusion, we *cordially* welcome this "helper" in the cause of science, and feel that the *present* argues very favorably for the *future numbers* of our cotemporary. We hope its value will be *fully appreciated*, by every friend of medical and dental literature.

#### NEW YORK MEDICAL GAZETTE.

THE numbers of this Journal, from one to twelve, have been duly received. It is "published every Wednesday, by Uriah Turner, M.D., No. 8 Park Place, New York, to whom all communications should be addressed." Price \$3, payable in advance. We have carefully examined this excellent Gazette, and cheerfully assure our patrons that it is well worthy their support. Although some have been disposed to "snarl" at every new Medical Periodical as being altogether uncalled for, and unnecessary, in this land and age of enterprise, we aspire not to be of the number of such. We cordially offer the "right hand of fellowship" to every effort of the kind, that is decent in matter, and of creditable dress; both of which eminently characterize the New York Medical Gazette. Surely there is both talent and disposition in the profession of that great city and State, to foster the present undertaking; and abundance of material of daily occurrence to be served up creditably and usefully. We wish the Editor uninterrupted and ample success in his course, as it relates to the number of "paying" subscribers; useful (as well as talented) collaborators, and the smiles of all with whom the Gazette may have intercourse.

#### WESTERN JOURNAL OF MEDICINE AND SURGERY.

This Journal also comes to hand regularly. It is published monthly, in Louisville, Kentucky, and edited by Daniel Drake, M.D., and Lunsford P. Yandell, M.D., Professors in the Louisville Medical Institute, at \$5 per annum, payable in advance. The September number, (being the third number of the fourth volume) is before us, containing much that is interesting and useful, in the "original" and "selected" departments. If any thing, in addition to the names of its Editors, is needed to give token of success, it may be found in the list of collaborators. We recognise in it the names of many, very favorably known and appreciated, both at home and abroad.

#### THE GUARDIAN OF HEALTH.

AND still another, and from Baltimore too, of which it has been "significantly" asked, can any "good thing come out of Nazareth?" We can not of course, in common decency, say any thing, of our own effort, to wipe off the stain that has been so long upon this "Nazareth" in medicine, and medical literature. We may, however, be permitted to say a word or two in reference to the "Guardian," the first, second and third numbers of which, edited by our friends C. A. Harris, M.D., and T. E. Bond, Jr. M.D., has just been placed upon our table. This periodical is issued in monthly numbers, of 16 octavo pages each, at \$1.25 per annum, payable in advance, and is what its title announces it to be. The design of the Editors is to furnish something of similar character to the late "Journal of Health," a work by the way, which ought never to have ceased to be. From the

appearance of the numbers before us, we are inclined to think, our friends will meet with the success their well meant effort deserves, for deserve it, it does. As the "Guardian" is adapted to the family as well as professional circle, we sincerely trust, it will meet with a hearty welcome, from the thousands in our own city and State, (as well as throughout the whole country,) who are threatened with as much quackery, and as many vile nostrums, and compounds, as they may have time to entertain, inclination to swallow, and money to pay for. We wish the worthy Editors in their enterprize a long life of usefulness and success, and very cheerfully recommend the "Guardian" to our patrons, and bespeak for it, their individual favor and personal influence, in giving it extensive circulation. If there is any thing in the number before us, which is calculated to retard its usefulness, it is in the length of the articles it contains. In a work of this character, particularly, in order to be generally useful, it must present no obstacles to its being generally read. A most formidable barrier to both of which, will unavoidably be found, in long articles, whether original, selected, or editorial. If our opinion is worth any thing on this score, we earnestly press upon its Editors the necessity there is, to avoid this rock.

# FOREIGN INTELLIGENCE.

#### ANATOMY AND PHYSIOLOGY.

Professor Arnold on the Functions of the Pneumo-gastric and the Accessory Nerves.

This distinguished Professor has long paid much attention to many of the disputed points in the physiology and pathology of the nervous system. The following observations on the functions of the pneumo-gastric and the accessory nerves—the 10th and 11th pairs of the cerebral nerves according to the arrangement adopted by most German anatomists—deserve our notice. They are based on the phenomena exhibited—1, by lesions of these nerves—and 2, by experiments performed on the lower animals.

The author has collected the following cases of morbid lesion from various sources.

a. A priest, sixty-two years of age, had from his youth been subject to gouty attacks. During the last seven years of his life, the stomach was the seat of his chief sufferings; for eighteen months his principal distress was a most voracious appetite, which could scarcely be satisfied with any quantity of food. The contents of the stomach, when rejected by vomiting, did not exhibit any symptoms of digestion, even three or four hours after being swallowed. The respiration became embarrassed; and when the dyspnæa was most severe, a whistling noise was made, as if the glottis was contracted.

The patient became much emaciated; the pulse was natural in point of frequency, but always rather strong; and there was never any pain felt in the chest. For several weeks before death, opium in all forms produced disagreeable effects.

The employment of galvanism generally relieved the dyspnæa. Numerous purple spots made their appearance on various parts of the body; but these vanished for some time before death.

Dissection.—Two pints of a deep colored fluid were found in each pleural cavity; the lungs themselves seemed healthy; the pneumo-gastric nerves, from the nucha downwards, were smaller and softer than usual, resembling in consistence the nerves in putrid bodies which have been subjected for some time to maceration; the left nerve was smaller than the right one.

Swann, who has reported this case in his work On the Local Diseases of Nerves, supposes that the fluid in the pleuræ had been effused only a short time before death. He adds that, in other two cases of death from thoracic complaints,

he had found the nervi vagi considerably smaller than they are usually observed to be.

Professor Arnold remarks, that the symptoms in the preceding case are exactly those observed in animals after section of these nerves.

b. A woman who died poitrinaire, had for a length of time been subject to an almost insatiable appetite.

On *Dissection*, both nervi vagi were found to be covered with minute reddish oval ganglia, of the size of small peas, and formed of the nervous substance itself, and not of the neurilema; the two sympathetic nerves were atrophied.

c. The next case is reported by Dr. James Johnson, in the Medico-Chirurgical Review, for July, 1836.

A lady, 76 years of age, had suffered for twenty years from pains in the head and back. When Dr. Johnson first saw her, she was greatly emaciated, and suffering from inexpressible anguish; she could not articulate a single word, and could scarcely swallow the smallest quantity of jelly. She experienced neither hunger nor thirst: food was introduced into the stomach by means of an æsophageal tube. She frequently complained of great tenderness in the epigastric region. Galvanism was tried, but it failed of producing any benefit. All the symptoms continued up to the period of death.

On Dissection, the pons Varolii, the medulla elongata and upper portion of the spinal cord were found in a state of ramolissement; the left vertebral artery, on its issue from its osseous canal, was considerably enlarged, so as to compress the corpus olivare and pyramidale of this side, which seemed smaller than their fellows on the opposite side. From the same cause the roots of the glossopharyngeal, the pneumo-gastric, the accessory and the hypoglossal nerves were somewhat pressed upon; their structure, however, did not exhibit any abnormal appearance. In the chest, there was discovered a small aneurismal tumor on the descending aorta, on the surface of which the left pneumo-gastric nerve was stretched, so as to take the form of the letter C. There was no contraction of the æsophagus in any part. The author, Dr. Johnson, was of opinion that respiration and digestion had been maintained by the intact nerves of the right side.

d. A case is mentioned by Bell, in his physiological and pathological researches on the nervous system, in which a convulsive affection of the sterno-cleido-mastoid and of the trapezius muscles was the most remarkable feature.

The patient was obliged to support his head with both hands; he complained that his body was always drawn round to one side with great force. The sternocleido-mastoid muscle during this time became tense as a board, and the right side also of the neck became almost equally stiff, owing to the convulsive contraction of the trapezius muscle. The head was drawn and fixed downwards, the face being turned to the left side, and the chin directed upwards. The breathing was unembarrassed, and there was no pain felt in the chest. When the spasmodic attacks were very violent, the muscles of the larynx became affected, and the patient seemed to try to expectorate something that hindered him from speaking. These attacks were brought on by drinking any fluid: it was only during sleep that they ceased entirely.

Besides these four cases, now briefly reported, we may point to other twoone published by Cappel (De Epilepsia e tumore nervo vago inherente, Helmst. 1781,) and the other by Tilgen, (Diss. obs. syst. fungi medullæ nervi vagi, &c. Bonnæ, 1830,—Raucedo, tussis, vomitus Ciborum incoctorum et potuum.)

Professor Arnold has performed numerous experiments on dogs, rabbits, chickens, and pigeons, for the purpose of ascertaining the functions of the pneumogastric nerves.

It is unnecessary to give the details of these, and we shall therefore condense their general results in the following remarks.

The pneumo-gastric nerve is considered by Professor Arnold, contrary to the opinion of many physiologists, to be a sensory nerve, and as capable of communicating impressions made on its extreme filaments to the brain: these impressions being communicated with greater or less distinctness, according to the special functions of the mucous membrane on which it is distributed.\*

It communicates the sensation of hunger, and the besoin of respiration. It has not any direct influence on the secretion, or on the quantity or quality of the gastric juice, (as supposed by Tiedemann, Brodie, W. Phillip, &c. who have alleged that the secretion of proper gastric juice is suspended by the division of the nervi vagi;) nor upon the muscular contractions of the æsophagus and stomach, nor upon the process of chymification, nor on the muscles of the glottis, nor upon respiration or the movements of the heart, nor on the heat of the animal, nor on the process of arterialisation or the conversion of the black into red blood.

But as it is a nerve of sensation, and therefore cannot continue, after being divided, to communicate to the brain the besoin of breathing, the respiration becomes after their section slower and slower, the arterialisation of the blood is thereby impeded, the temperature of the body falls, the blood accumulates and stagnates in the cavities of the heart, in the great vessels, and in the lungs, and ultimately the animal dies suffocated. It thus appears that the fatal effects of the section of the nervi vagi are indirect, and are not, as many physiologists have supposed, attributable to any immediate paralysis of the respiratory parenchyma, or of the muscles of breathing, but rather to the besoin of breathing being no longer felt by the animal, and the consequent gradual retardation and ultimate suspension of this vital process.

Hence the circulation of the blood through the lungs becomes more and more embarrassed, and as the blood is but imperfectly aerated, the functions of the nervous system gradually cease. The animal dies asphyxiated; but the asphyxia or suffocation is slow and progressive, unless there be some obstruction of the glottis or of the windpipe—as is apt to be the case, more especially when a young animal is the subject of experiment.

\* The division of the pneumo-gastric nerve in the neck is not productive of pain; but when the superior laryngeal branch is divided, acute suffering is experienced. The more exquisite sensibility of the larynx and glottis than that of the æsophagus and stomach is accounted for by Professor Arnold on the ground that some of the branches of the nerve are much less connected with, or involved in, its plexuses than others. Thus the superior laryngeal branches participate little, if at all, in the gangliform plexus, whereas that portion of the nerve, which descends to the gullet and stomach, contributes largely to its formation.

Now it is an admitted position in physiology, that nerves, which expand themselves in plexuses, convey impressions to the brain much less quickly and distinctly than other nerves which are insulated. The internal branch of the accessory nerve presides over the contractions of the esophagus, and those of the glottis and stomach: it becomes united with the pneumo-gastric in the neck.

It is, therefore, very important, as well in experimenting on animals as in observing the effects of disease in man, to distinguish the symptoms induced by any lesion of these two nerves.—Archives de Medecine, Août.

## Microscopical Distinction between the Sensory and the Motory Nerves.

In a paper on the functions of the ganglionary nerves by Dr. Remak, in the June number of Ammon's Monatschrift, we observe the following paragraphs:—

"Every nervous bundle is composed of an assemblage of primary filaments, which do not communicate together, but are only in juxta-position even in the most intimate plexuses." "Ehrenberg was the first to demonstrate by microscopical examinations that in every nervous bundle we may distinguish the motory from the sensory filaments; the former remaining after death quite cylindrical, and presenting only a slightly rugous surface, whereas the latter exhibit a distinctly varicose or nodulated appearance."

\* \* \* \* "Not only may we distinguish the sensory from the motory filaments, but we may also distinguish the filaments of those nerves belonging to organic life from those which belong to animal life: the former are of a red color and extremely slender, whereas the latter are white and much more distinct." \* \* \* \* \* "Usually we observe in a nervous bundle the three sorts of primary filaments the motory, the sensory, and the organic. The organic filaments, which proceed from ganglions backwards to the spinal marrow, become more and more slender, until they are at length lost in the substance of the cerebro-spinal axis." \* \* \* \* "In the cerebro-spinal system, there are two sets of actions performed; on the one hand, sensations perceived, and on the other, the reactions of volition. Two analogous actions are observed in the organic life: there is an organic perception, or what Hallar called irritability; and there is a reaction, or the function of organic reflexion, so ably demonstrated by Müller. We may therefore say that in the animal economy there is a double sensorium commune; one, belonging to the life of relation, is the cerebro-spinal axis; and the other, belonging to organic life, is the ganglionic system."

## On the Electrical Actions in Living Bodies.

Dr. Riche, a physician at Obernay, is the author of the following remarks, on this curious and most interesting department of physiological science. He commences his paper with laying down these positions:—

- 1. "Every molecular action, whatever be its cause, produces a state of electrical tension.
- 2. Every time that the electrical tension is destroyed by neutralization, the recomposition of electrical states, &c. there is a production of light (phosphorescence) with or without appreciable heat; and vice versa.

- 3. In bodies which are good conductors, the neutralization is instantaneous and consequently invariable; whereas, in those which are bad conductors, the neutralization takes place more slowly, and becomes sensible to our senses and our instruments.
- 4. The electrical tension of a body is the sum of the electrical tensions of its molecules.
- 5. Every time that an electrical current encounters an obstacle in its transmission through any part of the body, there is a production of heat. A calorific current produces, in the same circumstances, an electrical current. Light developes both the one and the other in different degrees.
- 6. An alternating series of molecules, which are more or less perfect conductors of heat and electricity, produces, by their mere position, an electrical or calorific current.
- 7. Lastly, electricity, caloric, and light, seem to be only different modes of manifestation of molecular movements."
- Dr. Riche proceeds to develope with great ingenuity his views of the manifold operations of living bodies, such as the functions of muscular contraction, of animal heat, of secretion, &c. all of which he regards as so many manifestations and results of electrical agency. In short, he regards the whole living organism as a wonderful electrical machine, obeying the general laws which pervade the universe, but governed and controlled in all its changes by a higher immaterial principle, the nature of which is beyond our ken.

A vesicular, cellular, and vascular organization; fluids charged with saline, acid or alkaline principles, and holding in combination phosphorus, sulphur and certain metals; an incessant composition and decomposition from the first moments of life to the period of death; a circulation of fluids through vessels of every nature and in various directions; a consumption of a large quantity of oxygen, the most favorable condition for the development of electrical action; lastly, a nervous system diffused or centralised, isolated, transmitting with the rapidity of lightning impressions from without inwards, and reactions from within outwards. Is not every thing combined in such a system for developing a maximum of molecular action?

The torpedo, and other species of electrical fish, display the effects of this action most vividly in consequence of the peculiar apparatus with which they are provided. If it be said that the peculiarity of these organs proves that they are an exception in the animal kingdom, it may be justly answered, that these organs are merely electric condensers; that the source of their electricity is not in them, but that this is transmitted by the large and numerous nerves of the brain; for we know that any mechanical irritation applied to the brain or its nerves augments the intensity and frequency of the shocks, and that the division of these nerves suspends their power altogether. Do we require fresh proofs?

By experiments on frogs, it has been clearly shewn that there are in these

animals electrical currents, which are independent of all external and foreign excitement or stimulus.

These currents produce muscular contractions, when they proceed from the nervous trunks to their ramifications, and sensations when they proceed in the opposite directions from the ramifications to the trunks.

Again, cats, horses, dogs, and man himself, often exhibit visible signs of electricity from exposure to the sun, or in consequence of friction of the surface or after muscular exertion: even electrical shocks, attended with sparks, have been occasionally given out by certain persons.

An electrometer exhibits signs of electricity, when it is brought in relation with a person placed on an *isoloir*. The mere approach of the finger will sometimes attract a needle which is finely suspended.

Lastly, in the operation of acupuncture, signs of an electrical condition have been distinctly perceived.

Now, what are the conditions which produce such sensible electrical effects in living bodies?

The blood is formed of vesicular globules, inclosing a dense colored liquid, and floating in a liquid which is less dense and which combines all the conditions of electrical conductibility.

Through the vesicular parietes of these globules, there is incessantly going on an alternate endosmosis and exosmosis;—actions which are always accompanied, it is known, with electrical currents: the blood, therefore, is electrical by its very constitution.

Moreover the blood, being subjected to a continual circulation, must exercise a certain amount of friction on the walls of the vessels which contain it—a new source of electrical tension, which is then transmitted to the nervous twigs distributed on their outer coats.

Again, the blood traverses the lungs, gets rid of various excrementitious products, and is electrified anew by this very process of elimination: it receives the influence of the external air with all its conditions of vitality—that is to say, of the oxygenated luminous air, possessing an electrical tension which is variable according to the bodies dissolved or suspended in it. The heat developed by respiration, circulation, and muscular contraction, tends to increase the electrical tension of the blood, by the movements thereby incessantly communicated to all its molecules.

This heat itself has its origin in the innumerable electrical discharges which are taking place every where and at every moment, and in the obstacles which the electrical currents meet with in passing from one molecule to another, from one liquid to another, and through the numerous cellules, membranes, and the parietes of vascular tubes.

To these various sources of electrical generation we may add the functions of digestion, of secretion, and excretion: and even then we shall have but a most imperfect idea of the constant decomposition and recomposition which are going on at all points of the living frame."

parenchymatous structure of the viscera? According to our views, this electricity, accumulated and concentrated in the nervous centres, is destined to the production of muscular contraction, as well as to the maintenance of an uniform animal temperature, and to the regulation of the acts of organic composition and decomposition.

We admit, with Professor Duges of Montpelier, that muscular contraction is the result of a series of electrical discharges, which rapidly succeed each other on the contracted muscles. The heat produced by exercise, and the fatigue which follows upon it, seem to confirm this view of the matter; for the heat is the result of the neutralization of electricity, and the fatigue is the result of nervous exhaustion."

Dr. Riche does not wish his readers to suppose that he regards nervous and electrical action to be strictly identical, or that the one term can be appropriately substituted for the other. Although there are numerous relations and points of resemblance between them, the former is in some mysterious manner modified by the living principle, so that we can never hope to imitate its phenomena by any artificial contrivance, however ingenious and complicated. Having again expressed his opinion that every muscular effort is the result of repeated electrical discharges in the muscles called into play—an opinion which is strongly confirmed by the circumstance, that in electrical fish, the body of the animal is always observed to be made tense and contracted before it gives a shock—Dr. Riche suggests an explanation of various morbid states of the nervous system on the doctrines now propounded.

\* \* \* \* \* \* \* \* "The derangements of innervation may be considered—1, as the result of an insufficient or of an excessive electrical tension; 2, as the effect of an impediment to the transmission of electrical currents;—3, as dependent upon a feebleness of the will or on a depraved instinct, or on both together. (A well disciplined moral education, exercising, directing, and controlling the will, giving it the mastery over the body, and over each of the organs in particular, and keeping the instinct within limits compatible with the moral and physical welfare of the individual, is the best preservative against the last named cause of nervous diseases.)"

Our author seems to be a partial believer in Animal Magnetism. Let us hear what he says:—

"We may perhaps refer to the electricity of living bodies, whatever has been well confirmed as to the effects of animal magnetism; for example, the sedative and exciting phenomena produced by its operation. Every time that we operate with due precaution, perseverance, and impartiality, we shall produce these effects; there is no need of a blind credulity on the part of either the patient or of the operator. An organised body, better perhaps than any other, may be electrised by influence or by contact, through the means of electricity naturally developed in the living body, and which can be directed specially to such or such a suffering part. The experiment becomes still more easy, when the two actors are placed on insulating stools. It is the foolish pretension to produce extraordinary and marvellous effects which some operators have put forth, that has prevented many useful results being obtained from animal magnetism."

It remains now to notice briefly Dr. Riche's remarks on the properties of electricity as a remedial agent.

In the treatment of palsy, it is better to give a succession of smaller shocks by induction, than by the more powerful discharge of a Leyden jar. When we wish to act deeply with feeble currents, and still more when our object is to cauterise by means of the heat produced in metallic wires by a strong current of electricity, we must have resort to acupuncture; this too is the proper method of employing electricity for the purpose of discussing or altering the vitality of tumors and other morbid degenerations." \* \* \* \* \* Revue Medicale.

#### MATERIA MEDICA AND PHARMACY.

## New Method of Covering Pills.

THE plan proposed by M. Garot for this purpose appears to be very simple, and is said to be very effectual in most instances. It consists in dipping the pills for a moment in a solution of gelatine and allowing this varnish to dry on their surface. The only objection to this method is, that if the pill be soft, or if it contains any oleaginous or oleo-resinous matter, as copaiba balsam, the gelatine by contracting, during dessiccation, firmly around the surface, is apt to squeeze this matter out. This inconvenience, however, is obviated by adding a little gum and sugar to the gelatine that is used. The following is a good mixture for the purpose:—take of dry gelatine one part, pate de jujubes, seven parts, and of water as much as is sufficient. These materials should be slowly dissolved in a sand-bath, so that the mixture may acquire the consistence of syrup. The pills are then picked up with a long needle, and dipped in the solution. If they contain any oily or resinous matter, it will be well to give them a second coating afterwards, when they have become quite dry. The little aperture left by the needle should be afterwards closed by touching it with the solution. The mixture which we have recommended, dries almost as quickly as the pure gelatine, and, besides contracting less firmly, it has a pleasant taste in the mouth.—Journ. des Connaissances.

# Iodine in the Opacity of the Cornea.

Dr. Lohsse has employed iodine in cases of corneal opacity, arising from syphilitic opthalmia, where vision has been nearly destroyed. The remedy was given internally, and six or eight drops of the following collyrium put into the eye three times a day:

By. Iodine, gr. i. Hydriodat. Potass. gr. ij. Aq. Distill., 3vj.—M.

Afterwards the following ointment was substituted for the collyrium; viz:

B. Iodine, grs. iss.
Potass. iodide, gr. i.
Adep., \$\forall ss.\to M.

A small portion of this ointment to be placed between the palpebræ two or three times a day. Cure was perfected in three months.

Note by Professor Parker.—It is now several years since I first made use of iodine in diseases of the eye. I have found it most successful in the treatment of granular lids and in strumous ophthalmia. For the removal of granulations, I use the following ointment:—

Put a small portion of the unguent under the lids every night on going to bed.

Two or three drops of the collyrium are to be put into the eye three times daily.

Medicinische Zeitung.

## Stramonium in Neuralgic Affections.

PROF. SHORT has put into our hands a letter from Dr. J. W. Richardson of Rutherford county, Tennessee, in which he cites many facts in favor of stramonium, in different neuralgic disorders. He prepares the system of his patient by vomits, purges, venesections, and low diet; and then gives half a grain of the extract of stramonium, prepared according to the U. S. Pharmacopæia, every six hours, till dimness of vision is produced.—Western Med. and Surg. Journal.

# Tincture of Aconite in Neuralgic Pains.

THE formula for the preparation of this tincture as employed by Mr. Curtis, is that recommended by Dr. Pereira in his "Elements of Materia Medica." The root is collected in the spring and dried. The tincture is made as follows:—B. Root of Aconite, ibj. rectified spirit, O iss. Macerate for fourteen days, and strain.—London Lancet.

# The Vapors of Nitrate of Potassa in Asthma.

I HAVE lately met with some cases of asthma, in which great relief was derived from inhaling the vapors arising from the decomposition of nitrate of potassa. The patients, after saturating white paper with a solution of the nitrate, and drying it thoroughly, set it on fire, and dropping it into some close vessel, inhale the gases evolved by the combustion. A teapot answers well for the purpose, but it is sufficient to drop the ignited paper in a common glass tumbler, applying the mouth to it, while it is filled with the vapors. The relief has been manifest in several

cases, and in one complete. The subject, a gentleman aged 55 years, had been afflicted with asthma for more than twenty years, the paroxysms of which were marked with all the distress that attends that disease. For five years past he has been exempt from it, and his restoration he attributes entirely to this remedy. He was in the habit of carrying with him, in his pocket-book, paper prepared for the occasion, and of resorting to the fumes whenever he was threatened with an attack.

A lady, of about the same age, has derived great benefit from these inhalations, in the same disease. The paroxysm is always shortened, and greatly mitigated, by a resort to them.

At present I have a patient under my charge, laboring under a pulmonary affection, one of the most afflicting symptoms in which is dyspnæa. For this he has been inhaling the vapors of the nitrate for some days, and the result is that he expectorates with more freedom and ease, and his breathing is much improved. In his case the remedy does not promise so much, as there is reason to fear the existence of organic lesions.—Dr. Yandell, in Western Med. and Surg. Journal.

### Utility of Alum in Diseases of Mucous Membranes.

The action of alum, as a local application, seems to be extremely beneficial in the various forms of inflammation and ulceration of the different mucous membranes of the body. Thus, in stomatitis or the membraneous inflammation of the lining membrane of the mouth, in angina tonsillaris and pharyngea, in some affections of the larynx, in deafness dependent upon an obstruction of the Eustachian tube, in numerous diseases of the vagina and cervix uteri, &c. this remedy has, when judiciously used, been productive of the greatest advantage.

M. Delmas, one of the physicians of the Montpelier Hospital, has recently published an interesting report of his practice with this agent, and from it we derive the following observations.

It may be unnecessary to allude to various affections of the throat, as the use of alum in the form of a gargle is well known in such cases to all practitioners; but few, perhaps, are aware of its great utility in some of the forms of ulceration of the generative organs in both sexes. M. Delmas has derived great advantage from its employment in those large but superficial ulcerations which are so often found to exist in women affected with lucorrhea. In the majority of such cases, the neck of the womb is more developed than in health, is very sensibly tumefied, and sometimes presents on its vaginal surface large granulations, which bleed on the slighest contact, and occasionally resemble some form of cancerous ulceration; these are the cases in which the alleged cures of cancer of the cervix uteri have been reported to have been effected. M. Delmas congratulates himself at having arrived at nearly the same conclusions as M. Recamier. This distinguished physician has used alum very extensively in various forms of ulceration of the uterus, and with the happiest results. Although it cannot cure cancer, it is often found to induce an advantageous modification in the diseased action of the adjacent tissues, and thus to retard very materially the progress of the greater evil.

M. Delmas has used alum not only in numerous affections of the mucous mem-

branes, but also in the solutions of continuity of the skin. Here the application of it gives rise to much more decided effects, and the pain which it occasions is sometimes so intolerable that it may be necessary to moderate its action by incorporating it with cerate, and by adding, if requisite, some preparation of opium. It is more especially, when the ulceration of the skin is connected with a syphilitic condition of the system, that we find it expedient to act in this way; for in those old chronic sores, which seem to have acquired a sort of right of domicile in the part, we are seldom obliged to modify the dressing. One of the most remarkable cases which has occured in the practice of M. Delmas, was observed in a patient affected with elephantiasis. The right leg had become swollen to three times its natural size, and had been for a length of time the seat of an ulceration which occupied the entire lower third at least of the limb. The case had resisted every means that had been tried at different times, and the poor fellow's constitution had in consequence become seriously impaired. After a month's dressing with alum (it is not stated whether it was applied in the form of a powder, or mixed with cerate, or dissolved) more than two-thirds of the extensive sore was firmly healed.

\* \* \* \* "In applying alum powder to solutions of continuity of the skin, it is sometimes necessary to mix it with lard, in consequence of the pain it occasions when applied alone. The form of dressing which I most frequently employ, says M. Delmas, consists in covering the wound with a thin layer of the powdered alum, and on the following day putting an emollient cataplasm over it, the use of which should be continued until the crust formed by the alum falls of. When this takes place, the surface of the wound is usually found to exhibit a more or less deep red color, and from this we are to judge whether the application should be repeated or not."

The result of his general experience are summed up in the following conclusions:—

- 1. That alum acts as a local application in inflammation of mucous membranes, by at once counteracting it and causing the morbid process to abort.
- 2. That when applied to solutions of continuity of these membranes, it greatly promotes the healing process, and that its action is never injurious in the hands of a judicious practitioner.
- 3. That it quickly determines the cicatrisation of ulcerations of the skin; but that its effects in such cases require to be watched, in consequence of the pain and re-action which are sometimes apt to be induced.
- 4. That in syphilitic ulcerations alum is a powerful local remedy, more especially when the constitutional disease has been already combatted by appropriate general treatment.—Journal de Med. de Montpelier.

## PATHOLOGY AND PRACTICE.

On the Alterations of the Blood in different Diseases.

In the last number of the *Medico-Chirurgical Review*, page 196, will be found a lengthened abstract of the important Memoir of MM. Andral and Gannaret, on the changes of the blood—more especially as regard the relative quantities of its fibrine, globules, and serum—in different classes of disease. We then pointed out the importance of such enquiries, mentioned some of the useful inferences that may be deduced from the results already obtained, and suggested that, in all probability, the most valuable discoveries in practical medicine will be made by following out a rational system of Humoral Pathology.

We are glad to find that some of the ablest men in France are beginning to entertain similar views to those which we have uniformly advocated in the pages of this Journal, and are giving their powerful aid in disseminating more just views respecting the necessity of attending to the conditions of the fluids in various classes of diseases. The names and high authority of Andral and of Rayer cannot fail to carry great weight with medical men of every country, and more especially with their own compatriots.\*

In a recent number of the French Journal Esculape, we find a memoir by a M. Monneret, entitled "Remarks on the Alterations of the Blood," of which we propose to give an analysis. He commences with an allusion to the decay of the Broussaian doctrine.

"For some time past there has been a decided reaction against the doctrine of Broussais, and the humoral medicine of the ancient physicians is no longer treated with that contempt and air of superiority which have characterised many modern pathologists.

We have discovered, though rather late, that we have been following in an erroneous path, by adopting with too much confidence the medical legislation of the Val-de-Grace; and at length many have been and are retracing their steps. We are not, however, about to return to all the vagaries of the old school, but will only assent to established truths, which actual observation may verify at any time.

Such is the direction which medical enquiries are taking at the present time.

Instead of limiting our attention to the lesions of the solids exclusively, without tracing them up to the physiological cause on which they depend, medical men are now engaged in studying the alterations of the blood and the other fluids of the body, and following out a method of enquiry which cannot fail of leading to very important results.

The recent memoir of MM. Andral and Gannaret has shewn what may be done, and has already contributed to throw considerable light on the pathology of many diseases."

<sup>&</sup>quot;We may refer our readers to some remarks on the humoral pathology, so to speak, of rheumatic and gouty affections, in the last number of this Review: vide art. Bouillaud on Articular Rheumatism.—(Rev.)

M. Monneret very justly remarks that, until within the last few years, medical men have occupied themselves too much with the minute chemical analysis of the blood, and have too often overlooked, in consequence, the more obvious and more important changes in the relative proportions of its principal constituents. However useful the elaborate researches of Lecanu and other distinguished chemists may be, we must remember that, for practical purposes at least, the examination of all the fluids of a living body should be conducted in a physiological, rather than in a merely chemical manner.

Before alluding to the changes which the blood exhibits in different diseases, let us dwell for a moment on the normal constitution of this vital fluid.

When blood is allowed to rest, it separates into two parts, the clot and the serum—the former consisting of the red globules and the fibrine, and the latter of water, which holds in solution albumen and various saline matters.

The fibrine of the coagulum forms a meshwork, in the interstices of which are entangled or enclosed the numerous globules to which the blood owes its color, and also a quantity of serosity similar to that in which it, the coagulum, floats. The principal salts which along with albumen are dissolved in the serum, or watery portion of the blood, are the muriates of potassa and soda, the sulphate of potassa, the carbonate of soda, and the phosphates of soda and lime. The globules seem to consist of albumen united to a coloring matter, to which the name of hæmatosine has been given.

The relative proportion of these different constituents in healthy blood may be stated thus:—

1. Fibrine3	parts	
2. Hæmatosine	66	The Clot.
1. Fibrine	66	
4. Liquid and dissolved albumen68	**	
4. Liquid and dissolved albumen	"	The Serum.
6. Water	**	The bolding
		,
1,000	parts.	

The relative proportions of these constituents of the blood are found to vary much in different classes of diseases; and these variations are so uniform and constant, that we are completely warranted in asserting that there is a strict relation between them and the nature of the morbid process that is going on in the system. For example, that a most characteristic feature of all the genuine phlegmasiæ is a superabundance of the fibrine of the coagulum, has been long known, and is most clearly proved by the researches of MM. Andral and Gannaret.

It appears also, from these researches, that in the genuine fevers, such as typhus, the various exanthemata, and certain vague or ill-marked pyrexiæ, the quantity of the fibrine is not increased, but is either stationary or somewhat below the normal standard. Again, chlorosis is an example where the proportion of the red globules is sensibly diminished; and in the *morbus Brightii* the chief morbid change seems to consist in a diminution of the quantity of the albumen held in solution by the serum.

These facts have indeed been long known to most practical men, who have not

allowed their minds to be fettered by the exclusive doctrines of the solidists; yet still much credit is due to MM. Andral and Gannaret for the statistical illustrations which they have adduced in support of them. One, however, of the most unexpected of all the results of their labors has been to shew that in *phthisis*, at least, in certain stages of it, there is almost always an excess in the proportion of the fibrine of the blood. M. Monneret says on this subject:—

"When the tubercles are still crude, the increase of the fibrine is scarcely appreciable; when they begin to soften, it is more marked; and at length, when vomicæ are formed, the proportions of this element sometimes rises to six parts in the thousand.

The red globules, on the other hand, follow the very opposite direction; their period of decrease is progressive from the commencement to the close of the disease: the difference often exceeds twenty parts. The disease is therefore represented in its complexion by the increase of the fibrine on the one hand, and by the diminution of the albuminous globules on the other. To the one of these alterations corresponds the complication, and to the other the pathological condition of phthisis."

Such is a very important discovery of modern humoral pathology—provided it be confirmed by the researches of others. However this may be in reference to the state of the blood in phthisis, the statements of MM. Andral and Gannaret are, we believe, entitled to implicit confidence on the important question of the pathology of fevers.

We cannot have a more convincing proof of the error of Broussais and his disciples, in regarding typhus and other fevers as of the nature of the genuine phlegmasiæ, than what is afforded by the researches of our authors. For while in the latter classes of diseases, the proportion of the fibrine of the blood is invariably increased, in the former it is never so, and in not a few cases is even sensibly diminished; whereas the proportion of the red globules is at the same time either unaffected, or somewhat higher than it is in health.

The following is a summary of the results obtained by MM. Andral and Gannaret's examination of the blood in different forms of fevers.

In simple continued fevers, no increase in the quantity of the fibrine is observed either during the precursory stage, or when the disease is fairly formed: in several cases it is sensibly diminished. On the contrary, the proportion of the red globules is almost always increased; this increase being sometimes very considerable.

In typhoid fevers also, although there is a decided inflammatory complication of the gastric and intestinal mucous membrane and glands, we never observe any increase in the proportion of the fibrine at any stage of their existence—a demonstrative proof, if others were wanting, that these fevers cannot be justly regarded as phlegmasiæ, and therefore that the terms gastro-enterite, mesentero-enterite, &c. are most fallacious and improper.

(We wonder how our friend M. Bouillaud will reconcile these facts with his practice of bleeding *coup sur coup*: doubtless, he is too adroit a debater not to be ready with an answer; for never did the poet's line

e'en though vanquished, he could argue still, apply to any one more truly than to the physician of La Charité.—Rev.)

In eruptive fevers, the genuine exanthemata, the proportion of the fibrine in the blood is almost invariably below the normal standard. That of the red globules is occasionally, as in many cases of scarlatina and rubeola, considerably increased. It appears therefore that the existence of a cutaneous phlegmasia is not in itself sufficient to induce an inflammatory condition of the blood, or that its influence is counteracted and neutralised, so to speak, by a specific principle on which the exanthemata depend.

In Intermittent fevers, the blood does not seem to undergo any appreciable alteration. Does not this prove that this class of diseases results from a general disturbance (ebranlement) of the organism, and that the nervous system acts an important part in their production?

Another important result of MM. Andral and Gannaret's researches is, that in cerebral congestions and hæmorrhages, the condition of the blood is very nearly the same as it is in simple fevers.

In not one of the fifteen cases of apoplexy, examined by these gentlemen, was the proportion of the fibrine at all increased, and in some of them it was diminished; whereas that of the red globules was found to be above the normal standard in every instance without exception. \* \* \* \* \* \* \* \* \* This double alteration, which is especially remarkable at the commencement of the disease, is characteristic. It proves that the less fibrine there is in the blood, the less coherent it becomes, and therefore that cerebral hæmorrhage is dependent rather upon an essential modification in the elements of the circulating fluid, than upon any lesion of the solids.

Still there is nothing absolute in this conclusion; for in numerous cases it happens that certain pathological conditions of the solid parts induce apoplexy, and then the blood does not exhibit the abnormal conditions which we have mentioned."

So much for the humoral characters of inflammatory, febrile, and some congestive and hæmorrhagic diseases. We come now to a very opposite class of maladies—those in which there is a striking diminution in the proportion of the red globules contained in the blood. In chlorosis, especially, and indeed in almost all cachectic states of the system, by whatever cause induced, this is remarkably the case.

In a case of diabetes the proportion was found to have fallen from 127, the standard of health, to 86; in a case of dropsy, connected with disease of the heart, to 68; and in various cases of chlorosis to 77, 70, 60, 50, 46, and in one instance to 38. In no other disease has the relative quantity of the red globules been found so low as in chlorosis. The gradual increase in this quantity during the administration of ferruginous preparations was repeatedly ascertained. How is this effect of steel to be explained? We must confess that we are unable to say: unless, indeed, by attributing it to the improvement of the general system, which is then enabled to bring back the process of sanguification to a healthy state.

With respect to the last division of diseases according to the humoral nosology—those in which the characteristic feature is an alteration in the proportion of the albumen dissolved in the serum—we have no new facts to mention. It is chiefly in Bright's disease of the kidneys that this change is most remarkable; for it would seem that the larger the quantity of albumen that exists in the urine,

the less will be found in the serum of the blood. As yet, no experiments have been made as to the state of the serum in other diseases, in which this morbid condition of the urine is known to exist.—L'Esculape.

#### M. BEAU on Auscultation.

In our last number we gave an abstract of M. Beau's first memoir, and directed our readers' special attention to the novel and very ingenious views which he has propounded. It will be remembered that his leading position is, that the respiratory murmur of health, as well as the various modifications which it presents in a state of disease, are owing to the retrogade resonance of what he calls the glottic sound in the bronchi and cells of the lungs, and not (as Laennec and all other auscultators have supposed) to the friction of the air on the parietes of these tubes and cells. According to this view, the glottis, and not the lung, is the proper seat of the vesicular murmur.

He draws what he considers a powerful argument in favor of his opinions, from the admitted fact that, in certain cases, this vesicular murmur is entirely inaudible, although the respiration continues to be regularly performed.

Now Laennec would never have hazarded such a conjecture, had he observed this phenomenon (as he calls it) in a case of organic, and not merely in one of spasmodic, contraction of the larynx. What, however, had escaped his notice, has been distinctly alluded to by Dr. Stokes of Dublin, and by M. Barth. The former of these gentlemen says, in his Treatise on the Diseases of the Chest;—"In the diseases of the larynx, the vesicular murmur becomes feeble in proportion to the degree of the obstruction. It is observed in some cases to be weak, or entirely absent, over the whole chest."

The latter (vide Archives de Medecine, p. 227, 1838,) thus expresses himself:—
"The vesicular respiratory murmur may be diminished, or altogether abolished, on both sides of the chest by any lesion which is capable of contracting the calibre of the upper part of the air passages."

Neither of these propositions is strictly correct. For, in truth, we frequently meet with cases of contraction of the laryngo-tracheal tube, in which the respiratory murmur is not only audible, but even louder than in health: and the reason

of this is, that the passage of the air being somewhat impeded at the obstructed point gives rise to an exaggerated blowing sound. It is only when the disproportion between the volume of air and the laryngo-tracheal obstruction is more considerable, that this sound loses its normal blowing character, and acquires a snoring or whistling tone. Under such circumstances the pulmonary resonance undergoes the same change; and hence the usual respiratory murmur is no longer audible.

This exaggeration on the one hand, and absence on the other, of the respiratory murmur in the lungs are sometimes observed, alternating with each other, in the same person. In a case of syphilitic swelling of the larynx, under the care of Professor Fouquier, the laryngeal sound was observed to vary according to the rapidity of inspiration; for it had a blowing character, when the air passed slowly through the contracted point, but immediately acquired a metallic-like snoring character, when the breathing was quickened. On auscultating the chest, these two different sounds could be distinctly observed to alternate with each other.

The same thing was noticed in the case of a man, who, having undergone the operation of tracheotomy for a contraction of the larynx, was obliged to breathe through a canula. In him there was heard a vesicular murmur, only in an exaggerated degree, because the orifice of the canula being rather small gave rise to a strong blowing sound; but when the canula was obstructed, and he was obliged to breathe by the mouth, a loud snoring sound was produced at the contracted point, and this snoring sound was reverberated backwards through the entire chest, overpowering and taking the place of the normal vesicular murmur.

These alternations of absence and of exaggeration of the normal respiratory murmur are frequently observed in hysterical patients affected with spasm of the glottis.

According as the glottis happens to be more or less contracted, there is a whistling or only an exaggerated blowing sound audible: and it will then be found that the lungs give out on auscultation at one time a whistling or sibilant sound which completely hides the ordinary vesicular murmur, and at another time an exaggerated blowing sound, to which the epithet *puerile* has been given by most writers.

To explain these phenomena according to the theory of Laennec, we must suppose that in the cases of considerable contraction of the larynx, where the vesicular murmur is replaced by an abnormal sound, the air does not penetrate into the cells of the lungs, and on the contrary that in cases of less considerable contraction, when the blowing sound is merely exaggerated, or, in other words, has become puerile, the air penetrates in a superabundant quantity;—an explanation which cannot surely be maintained by any unprejudiced reasoner.

M. Beau, after some further remarks on this part of his subject, proceeds to examine the subject of the various rales which have been described by auscultators. These sounds, he impresses on his readers, are very different from the abnormal conditions of the respiratory murmur, and of the voice, to which we have hitherto alluded; for they are solely and altogether the results of morbid changes in the bronchial tubes and pulmonary cells themselves, and not of the retrograde resonance of any glottic sounds. He divides them into two classes—

the vibratory, or dry; viz. those which consist in a more or less prolonged vibration of the air in consequence of an obstruction in some point of the air passages, and the bullar, or moist, viz. those arising from the rupture of bullæ, of larger or smaller dimensions in different cases, produced by the air traversing a fluid obstacle in these tubes.

The Vibratory Rales.—The most remarkable of these are well known as the sibilant, the sonorous or grave, and the snoring rales of Laennec and other authors.

\* \* \* \* \* \* \* \* \* \* \* \* \* \* \* \* The existence of these different kinds of vibratory rale is in general very transitory. A single expectoration or act of coughing is often sufficient either to cause them to cease altogether, or to change them into a form different from that which was present at first; thus the sibilant rale becomes sonorous, snoring, or blowing; or perhaps one of these last rales acquires the sibilant character, soon to be again transformed." \* \* \* \* \* \* \* \* \* \* \* \* \* \* \* \* \* \* The various vibratory rales may be of the same duration as the corresponding respiratory movements, or they may be shorter than these. The same rale may be heard both during inspiration and during expiration: or it may be present during one act and absent during the other. In the latter case, it is during the expiratory movement that the rale is most frequently heard—hence the number or variety of the expiratory is greater than that of the inspiratory rales.

To explain these last facts, we are obliged to admit that the obstacle in the bronchi, which sets the air in vibration, does not necessarily exist during both acts of respiration; and, as we have just stated, that the expiratory rales are in general more frequent than the inspiratory, it follows that the air meets with more impediments in its escape from, than in its entrance into, the bronchi.

The vibratory rales may have their seat in every point of the bronchial tree; but the different forms of these rales usually affect tubes of a different diameter. Thus the sibilant rale, conveying the sensation of an attenuated stream of air, is most frequently heard in the small bronchi; the grave or sonorous rale in bronchi of a middling size; and the snoring or loud blowing rales in the larger bronchi."

\* \* \* \* \* \* \* M. Beau attributes the origin of the vibratory rales in almost all cases to an obstruction of some of the bronchial tubes from the presence of viscid mucus, and very rarely to any actual swelling of their lining membrane. His chief reason for this opinion is, that "these rales seldom continue for any length of time the same, but are continually changing from one tone to another, from the sibilant to the sonorous or the snoring, and back again from the latter to the former. Now we get rid of this difficulty, if we suppose that the operating cause is the presence of viscid mucus in the air-passages; for, as this mucus may be displaced by any effort of the breathing, the character of the existing rale will depend chiefly upon the size of the tube, or tubes, which may be partially obstructed. In what other manner can we explain the occurrence of rales, which are audible during one only of the acts of breathing, and not during the other? The intermittent obstacle, which gives rise to them, cannot well be supposed to be a swelling of the lining membrane of the bronchi; on the contrary, how easily explicable is the phenomenon on the supposition that some of these air-tubes are partially obstructed by a portion of mucus, which having the form of a languette, and its edge being raised sometimes towards the larynx, and at other times towards the pulmonary cells, may be most aptly compared to a half opened

valve, which throws the air into vibrations either during inspiration or during expiration."

M. Beau accounts for the greater frequency of the expiratory than of the inspiratory rales on the ground that the air must encounter a greater degree of obstruction in its exit from, than in its entrance into, the small bronchi and the pulmonary cells, from the circumstance of the whole tissue of the lungs being more or less contracted during the act of expiration by the descent of the ribs and the rising of the diaphragm.

In consequence of this compression, which necessarily affects both the blood-vessels and the air-tubes of the lungs, the interval between the loose edge of the mucous obstacle and the corresponding wall of the tube must be more or less diminished, and the intensity of the rale, produced by the passage of the air, will therefore be proportionately increased.

As to the cause of the crepitant rale—the pathognomonic auscultatory sign of pneumonia—M. Beau suggests a novel interpretation:—

\* \* \* \* \* \* "It is generally supposed that this sound is caused by the rupture of extremely small bubbles of mucus in the pulmonary vesicles. But if we consider that the sound is not at all modified after a fit of coughing, and also that it is distinctly perceptible in many cases of pneumonia before any expectoration takes place, it may be fairly asked whether it may not rather depend on the friction of the pulmonary vesicles, which, like the pleura, pericardium, and the synovial membranes, are probably somewhat dried (dessechées) by the existing inflammatory action."

(The cases are certainly not parallel; these tissues being serous, whereas the surface, at least of the vesicles, is of a mucous character.—Rev.)

"Besides, a sound, exactly similar to the crepitant rale of pneumonia, is readily imitated by blowing air into the lungs of a sheep, which have lost part of their moisture. I should not hesitate, adds M. Beau, to adopt this explanation of the crepitant rale, if it was once proved to me that inflammation has the effect of drying the pulmonary vesicles." \* \* \* \* \* \* \* \* \* \*

After commenting at considerable length on the various other rales, M. Beau proceeds to treat of the auscultatory phenomena which are accompanied with a metallic sonorousness:—He says,

"Laennec was the first who discovered that when either a large cavern in the lungs, or the cavity of either pleura, contains both gaseous and liquid contents, we not unfrequently hear sounds which are altogether similar to those which a glass or metal vessel gives out when struck.

We cease to wonder at such an occurrence, when we find that it is not peculiar to the chest; metallic sounds being often heard in the cavity of the stomach, not only when the ear is directly applied to the abdomen, but when we listen at a considerable distance from it. We must confess that we do not sufficiently understand the exact conditions which are necessary for the production of this phenomenon, even in the case of inorganic vessels, whether of wood or of metal or glass. This, however, we know, that unless the air within them is thrown into vibration, they emit no sound; and so-it is with abnormal cavities within the thorax which gives out any metallic resonance:—it is never heard, unless a vibration takes place in their interior.

Now such a vibration may arise from several causes:—thus, 1. It is produced when a patient, in whom such an abnormal cavity exists, is briskly shaken by the shoulders, and the liquid contents of the cavity are made to strike against its parietes; the sound produced by this succession is sometimes very loud and may be heard at a considerable distance; it is the metallic sound of succession.—2. The voice, the act of coughing, &c. may occasion in the cavity a resonance quite similar to that heard by speaking in a well or in a large deep vessel; this is the metallic echo.—3. The resonance of the glottic souffle may give rise, by the vibration of the inspired air, to a sound similar to that produced by blowing into a large empty vessel; this is the amphoro-metallic sound.—4. Lastly, the mere rupture of large bullæ of air in the abnormal cavity may produce a sufficient vibration to cause a short and irregular metallic sound; this is the bullar tinkling.

It is therefore apparent that metallic sonorousness is not so much a special abnormal sound, as a peculiar tone (timbre) which the normal or abnormal respiratory sounds acquire under certain circumstances. Thus the metallic echo, and the amphoro-metallic sound, are only peculiar resonances of the voice and of the glottic souffle; while the bullar tinkling is nothing but a rale produced by the rupture of large air-vesicles or bullæ, acquiring a metallic resonance in consequence of the property of the cavity wherein it takes place."\*—Archives Gen. de Medecine Août.

### On the Diseases induced by Mercury.

DR. DIETERICH, of Munich, has published a lengthened work on the numerous forms of mercurial disease, in which he treats at length of all the maladies which are, or are said to be, induced by an excessive or imprudent use of this mineral—as hydrargyria, or mercurial fever, salivation, pancreatic ptyalism, diabetes, hydrosis or excessive perspiration, various exanthemata, as eczema, herpes, miliria, &c. different forms of ophthalmia, angina, periostitis, enlargement of the lymphatic and also of the parenchymatous glands, ulceration of the mucous membranes, neuralgia, asthma, tremors, paralysis, and several other diseases, including a peculiar form of cachexia.

We have no intention of following our worthy author through his somewhat lengthy lucubrations. We shall select only a few excerpta.

In the treatment of salivation he recommends, besides the use of gentle aperients, sudorifics, and cooling astringent gargles, the internal administration of iodine and creosote, both of which remedies have, he thinks, a marked effect in giving tone to the weakened salivary glands. The formula in which he prescribes the latter medicine is as follows:—

P. Olci Creosoti 3ss.
Pulv. Lycopodii 3ij. Misce.

<sup>\*</sup> It is physically possible that a drop may fall from the top of the cavity upon the fluid below, at the moment when the patient lifts himself up from the horizontal position, and that its falling may give rise to a metallic sound; but then it is difficult to conceive that a sufficient number of drops should be falling, one successively after the other, to enable us to explain the circumstance of this auscultatory phenomenon being heard for a considerable length of time.

Divide into sixty pills, of which three are to be taken twice a day at first, and the dose to be gradually raised to five three times in twenty-four hours.

The following are said to be the symptoms, &c. of Mercurial affection of the Pancreas.

"The pancreatic mercurial ptyalism, or alvine sialorhæa, has hitherto been generally confounded with the mercurial diarrhæa, which often accompanies it: it may, however, exist alone. It is indicated by a pain in the left hypochondrium which gradually extends towards the epigastric region, by unpleasant eructations, and a purging of white or greenish serous frothy matters. The eyes are languid, the face is pale, and the tongue dry; there is a most unpleasant, often metallic, taste in the mouth; the thirst is great, the skin cold, and the pulse small and rapid; subsequently, the colicy pains become more severe, and the region of the pancreas is the seat of a burning pain, increased by the slighest pressure, &c. &c. The best treatment for the relief of these symptoms is to cause a derivation to the surface of the skin, by the use of hot baths and epispastics, and to soothe the local suffering by administering some opiate preparation. Subsequently the use of mild astringents, as calumba, or the Peruvian balsam, is decidedly useful.

The acetate of lead promises to be of considerable benefit: and so does iodine, provided no inflammatory symptoms be present — Tonic and analeptic medicines will be required to restore the general health."

Mercurial Miliria is described to be a much more serious disease than is generally imagined.

\* \* \* \* \* \* \* "This form of miliary eruption, is connected with a striking disturbance of the nervous system. An imperfect pyrexia, attended with a most distressing sense of inward anxiety, and sometimes with more alarming symptoms, such as great restlessness, delirium, and even convulsions, precede its appearance. The pulse is usually small, soft and compressible; the urine is very pale; and the skin is bedewed with a faint-smelling perspiration.

Often the eruption disappears for a time and then returns; and sometimes this alternate retrocession and re-appearance take place repeatedly. This form of mercurialism usually terminates fatally; death being attributable either to an extreme exhaustion of the nervous energies, or to a dangerous pulmonary congestion being induced during the retrocession of the eruption. The treatment of such a case should consist in endeavoring to cause a derivation of the morbid action to the skin, in counteracting the alteration of the blood, and in relieving the nervous system."

Mercurial Ulcers. \* \* \* \* \* \* \* \* \* \* \* \* \* \* \* \* These usually form on the mucous membrane of the mouth or nose. There is observed a dark red or livid spot, which becomes white, then ulcerates and discharges at first a thickish grey-colored sanies, and afterwards a thin ichor, giving to the mouth a fætid smell which is easily recognised.

The ulcer gradually enlarges, creeping along the gums and inner surface of the cheek; it almost always gains more in extent of surface than of depth. It bleeds upon the slightest touch, and the pain is often most excruciating when any thing is applied to it. Sometimes we observe that a distinctly venereal sore changes its nature, and assumes the mercurial character. When such is the case, it becomes first encircled with a livid circle; the edges swell; small blood-vessels are

often seen creeping along its surface; and the purulent discharge becomes of a thinner consistence.

Whenever such a change takes place, the use of mercury should be at once discontinued; opiate and mucilaginous applications are best at first, and subsequently aromatic fomentations and gargles; steel, mineral acids, &c. will be required to repair the health of the patient."

It would seem that this form of neuralgia is very much affected by the electrical conditions of the atmosphere.

By far the best remedies are sedatives, and ferruginous preparations." \* \* \* \* \*

Journal des Connois. Med. Chir. Juillet.

### SURGERY AND MIDWIFERY.

Cases of Neuralgia treated with Acupuncturation.

CASE 1 .- Neuralgia of the Foot .- A young woman, when 22 years of age, became affected with a most excruciating pain in the right foot, which was occasionally swollen and apparently highly congested. She was repeatedly bled and the foot was frequently leeched; but without effect. For ten months she was obliged to keep her bed. When admitted into the clinical wards of the Turin Hospital under the care of Professor Riberi, the seat of the pains and swelling was on the outer side of the foot; from this point the pains extended up along the leg, and the swelling affected the entire dorsum of the foot. Whenever the foot was lowered even a few lines below the horizontal level, the sufferings were much increased, and the same result followed the mere pinching of the skin. The "point de depart" of the pain was manifestly in the nerves of the foot. Antiphlogistic remedies were tried at first; but although the constitutional health, which had begun to suffer, was considerably improved under their use, there was no relief of the local neuropathy. M. Riberi then tried acupuncturation: ten needles were inserted into the flesh, and allowed to remain in for the space of an hour. The operation was repeated four or five days afterwards, and subsequently at seven different times. The second time, the needles were left in for two hours; then for three, four, and even five hours. From the date of the first operation, the pains were so much relieved that the patient could rest on the affected foot, and in the course of a month she was able to leave her bed and walk about, her sufferings having entirely ceased.

Case 2.—Sacro-lumbar Neuralgia.—Giuseppe Vola, 38 years of age, had in the course of the year been affected with hydrocele on both sides: he was radically cured in the one instance by incision, and in the other by injection of the sac with the tincture of iodine. Subsequently to this, he began to suffer from most

severe sacro-lumbar neuralgia. "This I relieved as by enchantment," says Prof. Riberi, "by means of a single acupuncturation; the needles were left in for three hours. Three days subsequently the pain returned; and again it was as quickly relieved."

The place where the needles were inserted, and the number used, are not stated.

Case 3 .- Severe Brachial Neuralgia .- A young woman, about 20 years of age, had been often affected with various nervous complaints. While being bled from the arm, she experienced, at the moment the incision was made, a violent involuntary trembling accompanied with an intense pain in the fold of the arm, and a rigid contraction of the forearm. This contraction continued with such violence that it could not be overcome by the use of splints or any other means that were used. When admitted into the hospital, the chief symptoms were the intense pain of the arm, complete loss of sleep, and considerable derangement of the digestive organs. The pain was of two kinds; the one dull and cramp-like, the other lancinating and burning. The seat of the former was chiefly in the course of the median nerve, and extended downwards from the fold of the arm to the fingers; whereas the latter, which was not accompanied with trembling of the affected parts, involved all the nerves of the arm, not excepting those of the skin, and sometimes passed on to the trunk, affecting the lungs and the heart hence the sense of suffocation and of constriction of the chest, and the syncope, which often supervened during the paroxysms of suffering. The cicatrix presented a small, almost imperceptible knot, which was certainly not the only, nor even the principal cause of the pain. The severity and continuance of the patient's sufferings at any time seemed to be much influenced by the state of the atmosphere.

The paroxysms of pain were brought on by either quickly extending or bending the fore-arm or all the fingers at one time, or by pinching the middle finger, or again by pressing on the cicatrix at the bend of the arm, or by gently rubbing the arm or fore-arm with the hand, &c.

Whatever was the exciting cause, the pain, developed either in the cicatrix or in the fingers, shot with the rapidity of lightning to every part of the limb, then to the shoulder, chest, and region of the heart, and the most frightful symptoms were induced.

To prevent all sorts of friction, pressure, or extension of the limb, the patient, when walking, lowered her shoulder and inclined her body to one side, as if she was affected with a lateral curvature of the spine.

After trying the effects of the internal use of belladonna and henbane, and of the external employment of prussic acid, &c. Signor Riberi had recourse to acupuncturation. From ten to twenty slender needles were inserted into the flesh of the arm along the course of the median nerve, and allowed to remain in for from two to four hours. This operation was practised about twelve times in the course of two months. After each acupuncture, a very marked relief was obtained; and ultimately the patient was completely and permanently cured. It deserves to be mentioned, as a very striking proof of the efficacy of the remedy, that from the very first day of its employment the patient was able to move the arm without much distress, and the pain, from being fixed, became moveable, and

ceased at those points where the needles had been inserted: so that by multiplying these punctures, the pain became more and more distant, and at length finally ceased. After the sixth operation, the patient did not complain of any pain, unless when firm pressure was made over the course of the median nerve or of its principal branches; and after the tenth operation, she was able to use her arm freely in her domestic occupations.

Case 4.—Lumbo-sciatic Neuralgia.—A countryman, 63 years of age, was admitted into the hospital with a large hydrocele of the right testicle. The urinary passages were excessively tender, and there was always more or less ischuria. The hydrocele had been preceded with severe pains not only in the affected testicle, but also in the right groin and in the loins, which had continued with great violence for ten days, and were followed by the occurrence of numerous varices of the veins in both legs, and more especially in the left one. Subsequently to this, the patient had suffered with symptoms of inflammation of the upper part of the spinal marrow—the chief symptoms were vertigo, stupor, spasmodic pains in the upper extremities, and afterwards a sense of dullness and weight in these parts. By the use of leeches, and of a seton, &c. these symptoms were entirely removed. The hydrocele, which was of several years standing, had acquired a considerable size; and the patient complained of intense neuralgic pains in the corresponding testicle, radiating from this point to the loins, and to the right sciatic region, in which it ultimately fixed.

After the evacuation of the water from the tunica vaginalis, the lumbo-ischiatic pain became more severe than ever, and the right limb was quite powerless. Twenty needles were inserted,—(it is not stated where)—and allowed to remain in for upwards of three hours. The operation was repeated four times; and a radical cure was obtained.

Case 5.—Painful Paralysis of the Limbs.—A middle-aged woman was attacked, subsequently to a troublesome disturbance of the menstrual function, with severe pains in the loins, which were gradually followed by a paralysis of both lower limbs. Every now and then she experienced spasms, which extended from the limbs to the abdominal parietes and spine, and were accompanied with formication, lancinating pains, a sense of tightness and constriction and of great heat. To these symptoms succeeded a numbness in the limbs, extreme sluggishness in the intestinal and urinary evacuations, and at length a state of complete paralysis. Various local stimulants had been tried; but they seemed to be rather hurtful than otherwise. This indeed might have been expected, seeing that the disease depended upon a sub-inflammatory state of the lower extremity of the spinal cord and of the principal nervous trunks which issue from this part. Under the use of perfect quietude and a mild antiphlogistic regimen, the patient somewhat improved; and Professor Riberi then had recourse to acupuncturation. Twenty needles were inserted into the sacro-lumbar region, and along the course of the sciatic nerves, and allowed to remain in for about three hours: this operation was repeated eight different times.

After the second operation, the pains had nearly ceased; and soon afterwards the bladder recovered its expulsive powers. At the end of three weeks from the first employment of the needles, the woman was able to leave her bed and walk about the wards without the aid of either crutch or stick. Gradually the limbs

regained their healthy suppleness and force, and a complete and durable cure followed.

The last case reported by Professor Riberi was one of more than ordinarily severe lumbago, which had resisted all the usual remedies. Acupuncturation was therefore had recourse to, and with the best effects; for ultimately the patient was quite cured. The operation was repeated ten different times; eighteen or twenty needles being introduced each time. It was remarked that the pain never returned in the seat of the punctures.

The series of cases now detailed proves, in a very satisfactory manner, the powerfully remedial effects which the operation of acupuncture has in relieving various forms of neuralgic suffering. The attention of practitioners is apt to be distracted in the treatment of this too-often most unyielding complaint by the multitude of remedies which are daily proposed: acupuncture is certainly one of the most efficient, and deserves a more extensive trial than has hitherto been given to it.—Gazette des Hôpitaux, No. 96.

# Immovable Fracture-Apparatus for Varicose Ulcers of the Leg.

John Grant, aged 45, of spare habit, but of general good health, was admitted into the Leeds Infirmary, Sept. 8th, 1840, under the care of Mr. Teale, on account of ulcers of the leg.

After he had been purged freely and confined to bed for two days, lint was applied over the sores, and the entire leg from the toes to the knee was enveloped in the "immovable fracture apparatus," consisting of calico stiffened with mucilage and chalk. The material employed for this purpose is similar to that which was stated to be in use at St. Bartholomew's Hospital, and consists of a kind of pasteboard, formed by two layers of thick calico cemented together by an interposed stratum of mucilage and chalk. Two portions of this pasteboard, adapted to the form of the leg, and softened by immersion in tepid water, are applied to the leg, and retained by a spiral calico bandage, over which is spread a layer of mucilage and chalk, and afterwards a second spiral bandage.

After the apparatus had been applied eight days, a slight degree of putrid odour was perceptible, and there was some appearance of matter oozing through the bandage at the situation of the ulcers; the apparatus was therefore removed, when the ulcers were found to be much diminished in size, the varicose veins no longer perceptible, and their thickened parietes could not be felt beneath the skin. The sores were dressed with lint, wax ointment, and a light bandage.

Oct. 9th. Ulcers healed. No return of varicosity.—Provincial Med. and Surg. Journal, Nov. 21, 1840.

## Bowen's Improved Apparatus for Managing Fractured Limbs.

'IT is the best apparatus, I say unequivocally," says Dr. Parker of New York, "that I have seen. It embodies all the advantages of Boyer's, Desault's, Gibson's, Bell's, Amesbury's and Smith's, with other merits of much importance, which none of these last-mentioned instruments possess." Dr. Cadwell, a surgeon of Water-

town, N. Y., assures us that this is admirably constructed for making extension; and from a close examination, we think, for ourselves, that it is a highly ingenious piece of mechanism, which must fulfil the intentions of the artist. The manufacturer is Mr. Nathaniel S. Raymond, a New England mechanic, who resides at Utica, N. Y., where orders may be sent. The agents in Boston are Messrs. Brewer, Stevens and Cushing, druggists, No. 90 Washington street. A complete machine for the leg and thigh is left with the editor, which is for the inspection of any who have either curiosity to gratify, or a desire to possess an important, useful surgical instrument. A description of it is wholly out of the question. Even with a plate there would be a difficulty in exhibiting the sliding joints: it must be seen to be understood or appreciated.—Bost. Med. and Surg. Jour.

### Polypus of the Uterus removed by the Hand. By J. Toogood, Esq.

In June, 1830, I visited with a gentleman of this place, a woman between 50 and 60 years of age, who had been suffering for a long time from violent hæmorrhage from the uterus, and on making a careful examination, a polypus of very extraordinary size was discovered. It was proposed to pass a ligature around it, but the patient wished to defer the operation for a short time, and when the attempt was made it was found impracticable, in consequence of the polypus being so soft and yielding, as to render it impossible to carry the ligature over its stem. As the patient's safety depended on the immediate removal of the tumor, I insinuated my hand into the posterior part of the vagina, in the hope of being able to place a ligature around it, until I found the stalk between my fingers; I then twisted it off, and withdrew the largest polypus that I ever saw; no hæmorrhage or bad symptom followed, and in a few days the patient was quite well.—Prov. Med. and Surg. Jan. 23, 1841.

To the Editor of the Boston Medical & Surgical Journal.

SIR,—I transmit to you the following case for publication in your Journal. The novelty and rare occurrence of such cases, may render it interesting to your readers; and it is hoped that you, or some of your experienced correspondents, may throw some light upon the peculiar condition of the system that gave rise to the singular and uncommon pathological phenomena.

Respectfully, your obt. servt.

West Feliciana Parish, La. June, 1841.

WM. STOCKBRIDGE, M.D.

### Obstruction of the Menses.

CASE.—Amy, a servant girl, belonging to D. H. Kellogg, Esq. had been laboring under an obstruction of the menses seven years. At the age of thirteen, previous to which time she had been healthy, she experienced the symptoms that usually attend the establishment of the menstrual discharge, but not followed with any flow from the uterus. These symptoms returned regularly every month, with increased local and general derangement. At each period, these symptoms abated

by a sanious discharge, sometimes by emesis, at other times by catharsis; and ceased entirely by eruptions upon the surface of the body, and a discharge of purulent matter, leaving her in a condition that unfitted her for the duties of the plantation. She had been married several years—no children, and perfectly indifferent to acts of conjugal intercourse. Commenced a course of treatment in June, 1838, as follows: B. Comp. tr. guiac., Zii.; tr. cantharides, spts. ammonia aromat. āā Zi. Dose, a teaspoonful three times a day. The bowels were acted upon by a cathartic every four or five days, and stimulating injections given per vaginam. After pursuing this course of treatment six weeks, the catamenia were secreted and discharged naturally; the eruptions upon the body, the sanious discharges from the stomach and bowels, with their painful attending symptoms, ceased entirely, and her general health became restored. She resumed her duties upon the plantation, entered into the enjoyment of sexual intercourse, and in process of time presented her master with an increase of family. Since this time she has been healthy and fruitful.

# OBITUARY NOTICES.

DIED, February 16th, 1841, after a few days' illness, in the 31st year of his age, Dr. Wm. N. Baker, Professor of Anatomy in the University of Maryland.

Dr. Baker, (the son of Dr. Samuel Baker, formerly Professor of Materia Medica and Therapeutics in the same school, and well known to this community for his piety, benevolence and skill,) was born January 17th, 1811.

After finishing his preparatory studies, he entered the sophomore class at Yale College, in 1827, and was graduated in 1830. Already had he become distinguished for that candor, sincerity and frankness, which always characterized him, and which always drew around him, a circle of warm and admiring friends. His talents also had given him a conspicuous stand with his class and were such as to lead his friends to anticipate for him an honorable position in the ranks of the profession of his choice,—nor were they disappointed. On his return from college he commenced the study of medicine under the direction of his father, and pursued it with zeal and assiduity.

Placed in such advantageous circumstances, with regard to the study of his profession, under the immediate eye of his father, than whom from his enlarged experience as a practitioner and a lecturer, his extensive acquirements and his sound views, none could be better adapted to direct the studies of the youthful aspirant for medical honors, he failed not to profit by them. A great portion of his time was devoted to the pursuit of anatomy, which he prosecuted under the immediate superintendence of Dr. Turnbull.

In 1832 he received the degree of M.D. and in connection with his father, was constant and assiduous in his attention to the sick and the dying during the prevalence of the fatal epidemic of that well remembered year. Up to the period of his father's death, he continued in conjunction with him to practice his profession.

During the winters of 1834 and '35, and '36, he lectured upon anatomy, to a private class, the number of which and their warm attachment to him, fully attested his attainments and talents as an anatomist and a lecturer, and his noble and endearing qualities as a man. In 1838 he was called to fill that chair which he occupied at the time of his death. Exceedingly pleasing and polished in his address, with a warm heart and affectionate disposition, he soon became a decided favorite with the class, and the best proof of his success as a lecturer, was to be found in their constant and regular attendance upon his lectures, and the ardent warmth of affection which they always manifested towards him.

In addition to the labors immediately connected with his department, he participated with Professor Hall in the daties attached to the chair of Surgery.

As a lecturer, his knowledge of his profession, a retentive memory, a ready eloquence and an impressive manner, rendered him peculiarly pleasing and instructive.

As a man he possessed in a high degree, all the virtues of an ardent, generous spirit, united with the most unspotted integrity and the most chivalric honor. His urbanity, his uniform mildness of disposition and kindness of heart, his ready sympathy for their sufferings and his untiring efforts in their behalf, secured him the confidence of his patients and won their esteem.

M.

IT is with feelings of the deepest pain and regret, that we notice the death, within six short months of that of his brother, of another of our medical friends and associates, Dr. Samuel G. Baker, Professor of Materia Medica and Therapeutics in the University of Maryland, and one of the Editors of the Maryland Medical and Surgical Journal, who died August 1st, 1841.

Dr. S. G. B. was born 2d October, 1814. His early education was received in his native city, Baltimore, where he was favorably known, as a boy, to his tutors, schoolmates and friends, for his industry and application. Having prepared himself, he entered the junior class at Yale College in 1830, and was graduated with credit in 1832. Entering his father's office, after his return from Yale, he commenced his course of medical studies with eagerness and avidity, impressed more than is usual with students, with a full sense of the beauty and dignity of the profession. This was no doubt owing in great measure to the bright example always before him in the person of his father. During the term of his studies, he was for some time senior student at the Baltimore Infirmary, where his zealous attention to the patients attracted the notice of all connected with the institution.

It was while here that the peculiar fitness of his mind for the study and practice of medicine was observed. He was even at this early period, remarkable for the clearness of his views, quick discernment, and sound judgment.

In 1835 he took the degree of M.D. and immediately entered upon the practice of his profession. Shortly after this, his father's death placed a large and extensive practice in the hands of his brother and himself, the duties connected with which he continued to discharge to within a few days of his early and untimely death. One of the most interesting points connected with this part of his professional life, was the considerate attention which he always manifested towards those who had depended upon his father for gratuitous medical advice.

In 1837, but two years after he had entered upon the active duties of his profession, and at the unusually early age of twenty-two, he received from the faculty under whom he had graduated, the appointment to the highly important chair of Materia Medica and Therapeutics, thus showing the confidence reposed in his abilities by those who best knew him. This must have been to Dr. B. a peculiarly gratifying appointment, the duties of the department over which his father had presided for many years, now devolved upon him, and truly might it be said that the mantle of the father had descended upon the son. From this time he continued faithfully to discharge his duties in the school, until the period of his death.

His lectures were always peculiarly interesting from the important practical precepts with which they were constantly mingled, from his manner, which was

forcible and impressive, and from the faculty which he possessed, in an eminent degree, of communicating knowledge clearly and convincingly.

From the time he became connected with the university, he had always a large class of private students, who were devotedly attached to him, and in whose welfare he always took the deepest interest.

His practice was characterised by decision, boldness and great fertility of resource. His readiness and accuracy of diagnosis, his practical views of disease and his indomitable energy in the application of his varied resources were distinguishing traits of his medical character.

Remarkable for his manly openness and candor, the warmth and sincerity of his friendship, and the strictly honorable motives which always governed his conduct, his death has left a void deeply felt by a large circle of admiring friends and warmly attached patients.

M.

DIED.—In Portsmouth, Va. on the 28th of July, Dr. John R. Chandler, of the U.S. Navy, in the 39th year of his age.

DIED.—At the Navy Yard, Pensacola, on the 22d of July, aged 51 years, Mordecai Morgan, M.D. Surgeon of the U.S. Navy, and lately Fleet Surgeon of the West India Squadron.

DIED.—At St. Augustine, Florida, on the 26th — Dr. Charles Noves, of the U. S. Army, aged 26 years.

DIED.—On Sabbath morning, August 22d, in the Maryland Tract, Frederick county, Md. Dr. Grafton Duvall, in the 62d year of his age. Dr. D. was once a member of the executive council of Maryland, and filled the duties of this post with distinction and usefulness.

DIED.—In Somerset county, Maryland, on 27th of September, Dr. John A. E. Horsey, after a short but painful illness.

DIED.—In Kent county, Maryland, on 6th of October, Dr. Morgan Browne.

DIED.—At his residence in Frederick city, Maryland, on the 15th of October, Dr. John Tyler, in the 79th year of his age. Dr. Tyler was supported by the friends of Jefferson, as one of his Electors to the Presidency, and during a long life has been held in the highest estimation by those among whom that life has been spent.

DIED.—October 16th, in Washington, D. C., Dr. RICHARD HARRISON, formerly of Anne Arundel county, Md.

DIED.—On the morning of October 2d, at the Naval Hospital, Pensacola, of the prevailing epidemic, after an illness of only three days, Dr. MICHEL, Fleet Surgeon, attached to the French Frigate Sabine. His remains were interred with the honors of war by the officers of the French Squadron, and those of the Levant, U. S. Navy, and Navy Yard, escorted by the Marine Guard, under Capt. J. G. Williams.—Army and Navy Chronicle.

# MARYLAND

# Medical and Surgical Iournal.

JANUARY, 1842.

# THE RELATIVE IMPORTANCE OF CHEMISTRY,

AS A BRANCH OF MEDICAL EDUCATION.

BY JAMES HAMILTON, M.D., BALTIMORE.

From the earliest foundation of institutions for instruction in the various departments of medicine, it has been invariably the aim of teachers to adopt those measures, in their opinion, best calculated for the thorough instruction of their pupils, and to offer thereby facilities for the acquirement of knowledge, intended ultimately to fit them for their responsible situation in life, and serve also to be creditable to the institution, where their medical education has been received.

The departments into which the study of medicine has been divided, vary in different countries and institutions, as the views of their teachers may lead them to adopt. Generally they consist of Anatomy, Surgery, Practice of Physic, Midwifery, Materia Medica and Chemistry, and of latter years, have been made to embrace Physiology, Pathology, Institutes of Medicine, Hygiene, Medical Jurisprudence, Pharmacy, &c.

From the earliest history of medical science, Anatomy has been regarded as the most important, and perhaps justly so, as it is generally considered to have claims above all the rest, from the conviction, that a thorough knowledge of the structure of the human body is necessarily the first step to be acquired, a point so well established that none at the present day will attempt to dispute it; it is not, however, the varied opinions of medical philosophers, that we wish to examine on this point, but rather the causes that bias the minds of the young in *their* opinions that are thus early formed, and that generally become so confirmed, as in their turn to influence others in the adoption of their views.

The effect of this impression, therefore, on the medical student, in entering upon his career of study, naturally causes him to bend his undivided attention to Anatomy, prior to undertaking the study of any of the other branches to which he looks upon as introductory; in fact, as if a knowledge of all the rest were dependent on an acquirement of this. Materia Medica is perhaps pointed out as the next object of his study, to acquaint him with the numerous articles styled remedial agents, intended to be applied to the practical part of his profession, with their action on the living system constituting Therapeutics. The practice of Physic, Surgery and Midwifery, will next be his subjects of study, and generally, last of all, Chemistry; it is not intended in the remarks following this, to derogate in the slightest degree from the importance of each of these, (fully convinced that none can be considered an intelligent physician who in his studies has not combined them all,) but rather to assert and vindicate the rights and importance of the last named, and to prove these assertions as they may be ventured. The order in which we have described the different divisions of medical science, as being presented to the student's notice, is certainly somewhat natural. First, the intimate knowledge of the complex machine so apt to become diseased; second, the remedial agents capable of acting on it; and third, the diseases to which it is liable, and the various means, mechanical or other, that may be used for its relief. The duties of the physician may not unaptly be compared to those of a watchmaker; he must first understand the structure of the piece of mechanism, then the means by which he may alter and repair it, and finally, the variations to which it

is liable. But do the labors of the intelligent man cease here, or is there no interest connected with the nature and constitution of the frame or of the remedial agents used? If there be, that should form, certainly, one of the first steps of investigation, else in practical exertions it will be only tampering with structures and substances of the nature of which he is utterly ignorant, and his deductions and treatment, based on error and supposition must be often false and fatal.

But to return, many-nay, in fact, a majority of the medical community, have had frequent opportunities of witnessing the carelessness with which Chemistry is viewed by the medical student, proved by the general complaint of its want of interest, its dryness, theories and speculations, difficult names to be remembered, &c. Nothing is in fact more common than the idea prevalent among students generally, that provided at their final examination, they are well prepared in Anatomy, Surgery, Practice and the more important branches, that a deficiency in one branch will not prevent them from obtaining their passport to the community as M.D.—a dangerous experiment, indeed, to make, but with very few exceptions I am led to believe often practised, and frequently induced by such reasoning as this. Supposing there are six distinct branches on which it is required the student should be examined for graduation; if he pass a good examination on four of them, and consequently obtain four votes out of six, that being a majority, he has then nothing to fear from the remaining two. Such a course is, first, a stigma on his instructers, who certainly would never affix their signatures to that which is regarded as a token of character, education and respectability, unless in his examination, the student had been found proficient in all of the branches required; and second, in the practice of his profession it exposes him to a chance of having his fondest hopes of success blighted, and a consequent slur thrown on his alma mater, by an oversight perhaps committed in one of the very branches which in his medical education he had thus neglected. Unfortunately, chemistry is generally regarded as that devoted branch on which he must take his chance, judging perhaps that he is well prepared in other five

branches, the sixth is neglected from a supposition that a rejection from an ignorance of it would be impossible. It is true that occasionally exceptions are to be met with, where from an innate taste or fondness for this study, or a previous acquaintance with its principles and consequent conviction of its importance, acquired during the student's academic course, the same or a greater amount of attention will be rendered it, but these are few, very few, and of rare occurrence.

The causes of this (and I appeal to every unprejudiced thinking mind in its behalf,) are several, reducible however to twothe first is the want of the proper amount of information on the subject possessed by young men generally in commencing the study of medicine, from the same cause which often prevent its study in medical institutions. In venturing this I would not be understood as implying that in the study of medicine, none can acquire a proficiency but those of a finished education; such is not my purpose, (although there is no profession where general information in all its extended scope of science and literature, is better suited and oftener expected than in this,) but that a student of medicine should be well informed of the principles of Chemistry, Mechanical Philosophy, &c. before he enters on his course of medical instruction; it would aid him to a great extent in acquiring the first outlines of his medical education, and suit him in fact for the reception of much information which otherwise may be considered as lost upon him. The second can only be attributed to the manner in which it is too often taught in medical schools; and in making this assertion, which may seem rash for a young member of the profession to venture, still with due deference and respect for the many time-honored and talented teachers of chemistry, in this and other countries, reason and truth will support me, and I therefore proceed fearlessly to give the cause.

In the rivalry which exists, and always has existed among the different medical schools, the various advantages of each are published to the world, so as to allure the eye of the student, who of course proceeds to attend that which in his opinion offers the greatest. In what do these advantages generally consist? In

Anatomy, the one will boast of a location well adapted for obtaining subjects, and consequent facilities in studying and acquiring a knowledge of this important branch. In Surgery, the frequent opportunities afforded the pupil of witnessing surgical operations, or their performance on the subject under the professor's eve; in Midwifery, the facility of admission into a lyingin hospital; in the practice of Physic, the walks of a hospital or infirmary where the novice may scan disease, diagnose and prescribe; in Materia Medica, in possessing the various articles of the pharmacopæia which may be used by the student to mark their external appearance, but in Chemistry the possession of a chemical apparatus by the institution is all that is deemed requisite, of the use of which, the student at the expiration of his course, may have some vague idea, or possibly may have acquired the name of some individual piece, but as to the ability of manipulating, in ninety-nine cases out of a hundred he is utterly incapable.

Let us regard for a moment the treatment or mode of inculcation, which is adopted in the various branches. In Anatomy, the professor unfolds to the student the various structures of the human body, and is careful to expatiate on their relative positions; author after author is made to pass through the student's hands, but is still deemed of little importance, unless accompanied by dissection, in which he unfolds and observes for himself. In Surgery, not content with witnessing surgical operations, he resorts to a repetition of them on the subject, practises carefully every position of the knife, every fold of the different bandages, forms of sutures, &c. In the practice of Physic, he will in the hospital that he may attend, carefully repeat the diagnosis of his professor, learn to distinguish the variety of pulses, and carefully examine for himself every feature of disease, but in Chemistry he is obliged to rest satisfied with descriptions, or with witnessing from a distance the exhibition of chemical processes. Under the dexterous management and skilful hands of his teacher, he will observe combinations, decompositions, and frequently gaze with wonder and astonishment on the result of some beautiful experiment, which will momentarily please the eye or

deafen the ear; he will observe the reduction of metals in the detection of poisonous oxides or their salts, and possibly be enraptured with the effects of electricity and galvanism, in which he will also have described to him the mode of their application in disease; his course is finished—he graduates—but when in the routine of his profession he comes to put the knowledge which he may have acquired into actual practice, he then feels his deficiency and looks back with regret that he had not had the opportunity of acquiring it before. Why this neglect in imparting the practical part of so important a branch of medical education? Is it that the apparatus is too costly to be entrusted to the student's use? Is it the expense of the chemical materials which would be consumed, or is it that it would occupy too much of the professor's time? Chemical apparatus in medical and all other schools should be designed more for practical utility than ostentatious display, and if the subject were viewed in its proper light, were its importance made sufficiently evident, the medical student would as cheerfully undergo the expense of chemicals, as he does the subjects necessary for dissection. True, it might prove too onerous on the teacher, but as in anatomy there is a demonstrator, so there should also in chemistry be an adjunct professor on whom this duty should devolve.

In this I would not be understood to imply the necessity of the repetition of all the illustrations which may be found requisite by the lecturer, but simply the extension of the privilege to the student of performing under his supervision, those manipulations which he may have occasion afterwards as a practitioner to employ, as for example, the modes of using electricity as a medical agent, use of reagents, &c. This would add interest to the study, and cause many of those who under present circumstances regard it with horror and disgust, to anticipate a lecture on chemistry, not as an hour of tedium and prosy detail, but as a refreshing, delightful relaxation.

But with or without illustrations, there is naught in chemistry to any one, far less the medical student, which can merit any thing like carelessness or neglect. Is it so regarded because of its comparative littleness, because it treats of the ultimate atoms

of matter, or because the size of these atoms is unknown? Anatomy is a description of the intricacies of structure of the human frame, and yet the anatomist is compelled to condescend and base his description of tissues on chemical principles and elements, and in the composition of its solids and fluids it furnishes the only means of explanation of which he is possessed. In materia medica it is to the aid of chemistry that we are indebted for the various active medicinal preparations in every day use, and even in most of the numerous articles of the pharmacopæia, we can only explain their action on the human system by reference to chemical principles. But it is in the practice of medicine, in the daily avocation of the physician, that the practical use and beauty of chemistry is experienced; not a prescription, however simple it may be, can be correctly written, unless a previous knowledge of chemistry has been attained; active compounds which he may fancy he is administering, will probably neutralize each other, will be chemically incompatible, and disappointment will often ensue from their failure in producing the effects which he had been led to anticipate. The prescription of a physician is in fact one of the best criterions whereby to judge of his knowledge of chemistry; it is true that the combination of incompatible substances may not be productive of injurious effects, but it will often cause a sneer even from the apothecary who compounds the prescription, and not unfrequently in critical cases, a sigh of disappointment from the physician himself. Here then we see the mischievous results of the inattention and carelessness of the medical student, a few years afterwards a medical practitioner; we will find him prescribing, for example, Nitrate of Silver in Aq. Fontis, will find double decomposition often occurring in the mixtures which he orders, in which he is administering inert compounds, formed either in the bottle containing the mixture, or in the patient's stomach, while he is anticipating the effect of active agents, and not aware of his own ignorance and error, he perhaps notes it as an idiosyncracy of the patient! This is no fanciful sketch, it is an every day occurrence, and will continue to be so until a reform has been accomplished in imparting this branch of medical science.

But the effects of a neglect of this important study do not cease here. In the country, at a distance from cities, the practitioner is frequently compelled to prepare for his own use extemporaneous preparations, and without a knowledge of chemistry he will often be deprived of many active compounds of which he may even possess the materials, while the better informed man will experience a pleasure and pride in bringing into play the principles which he acquired in his education, and which will often prove satisfactory to himself and advantageous to his patients.

In cases of poisoning, where the patient is often writhing in agony, when every moment is of value, and where the immediate administration of a proper antidote will alone save life, there is then no time to consult books, and it is not the learning by rote the long list of antidotes to the different poisonous agents, but the general principles of chemistry on which they are based, which will instantly suggest the proper one to the relief of the patient, and the safety of the physician's reputation.

In cases also where poisons have been administered with criminal intent, particularly in the country, the practitioner is liable to be called upon to examine and test the presence or absence of the poisonous agent; then it is that the faint recollection of having seen his former teacher go through the process, floats in the dim vista before him, he is obliged to devote himself to the subject new to him, though now perhaps a practitioner of some experience and standing, his mind is filled with doubt, the chemical implements before him for his use are novelties to him, and as he gives in his testimony, with his experimental results, it is with fear and trembling, lest even perhaps, some better educated member of the bar should question him too closely and expose his ignorance. In accidents resulting from persons entering pits, cellars, &c. long unoccupied, and others of a similar character, it is only the knowledge of the general principles of chemistry that will relieve him from embarrassment, inspire him with confidence, and elevate him in his profession.

The instances of situations in which the physician, ignorant of the principles of chemistry, may be placed, might be increased

to any extent, but enough has been detailed, we hope, to condemn the neglect of this noble study in the medical man. Only one excuse can be offered by the medical student against reading chemistry as extensively as the other branches, or in confining himself to one author; that is, the mystery with which some writers clothe their works, for example, in the use of chemical symbols, which, except to those familiar with them, appear like a difficult Algebraic problem. The age of symbols we had hoped had passed by, and in place of wrapping the subject in unnecessary darkness and difficulty, perspicuity and clearness should characterize every chemical writer. Even some who have had but few opportunities of obtaining chemical knowledge, in their bombastic communications to the various journals, are already aping the means which some distinguished chemists have adopted, for apparently no other purpose than to save them from the trouble of writing words at full length.

In the conclusion of these remarks, thrown hastily together, the writer would not be understood as aiming any of them at particular institutions or persons; they have been elicited from a conviction of their importance and neglect, and numerous instances have only tended to confirm the feelings of regret that he has always experienced in witnessing the comparatively mean estimation in which this study is too frequently held by the medical pupil. Upon such as may be entering upon their medical education, he would urge attention to chemistry, as next in importance to anatomy, and to give it that amount of close diligent study which it merits. When this is adopted by the pupil, with the additional care on the part of their teachers to render it a practical branch of medical education, we shall then have the profession better qualified to discharge at least some of those duties which we have attempted to prove often may devolve upon them.

#### THE RELATIONS OF

## CONSTITUTIONAL TO LOCAL AFFECTIONS,

A DISCOURSE DELIVERED BEFORE THE PATHOLOGICAL SOCIETY OF CINCINNATI.

BY WM. J. BARBEE, M.D.

THE influences modifying the uniformity of morbid action are many and various. They are moral or physical, external or internal. They abound more or less in all constitutions, and require attention from the watchful eye of the physician. And so multiform are the causes, which contribute to change the regular character of every disease that we are sometimes almost compelled to exclaim with Rush: "Disease is a lawless evil." Upon the strength of a limited knowledge of medicine, however, I am inclined to pronounce this theorism of the father of American medicine, upon the whole, erroneous. But let it be remembered that it has the shadow of truth, yea, that we do, in the course of our clinical observations, find it to be a lamentable fact; or at least, that if disease in certain cases has any law, it is either not revealed, or we are so blind and so deaf that we cannot see it written, or hear it announced. The law is a dead letter. In general, however, I would remark, that the axiom just recited is an extreme in medicine, and that if adopted would give rise to unhappy results; the spirit of enquiry now abroad in the medical world, would be dampened, and the profession would be likely to sink into empiricism.

From this extreme let us turn our attention for a moment to another equally erroneous, if not dangerous,—the doctrine that morbid action preserves uniformity and constancy; that each and every disease has a certain series of phenomena, certain phases, certain succession of stages, particular laws unalterable as those of the Medes and Persians.

I conceive it extremely difficult to establish any general rules for the morbid government of the body, to lay down a chain of causes and effects exhibiting the progress of disease, which shall be a guide to the observer. Knowledge of the fact that disease is disordered function, or organic alteration, would, a priori, lead us to the conclusion that no deviation from health can be governed implicitly by pathological laws.

If these remarks be true, all exclusive systems of pathology, all ultraism in our science must be rejected, and the stability of medicine rest upon accurate observation and the impartial report of facts.

All hobbies, when hard-ridden, are dangerous, and to me there is little difference between any two exclusive systems of pathology, whether they lead the theorist to the use of teas and phthisans for gastro-enteritis; Lobelia and No. 6, for driving heat to the surface, or compound pills for the relief of congestion of the vena cava.

I have said that the stability of this branch of our science must rest upon observation and facts. These constitute the foundation, "the pillar and ground" of pathological knowledge, but it is to be regretted that the superstructure does not correspond to the base. We have an architecture of a very strange "composite order," and that it may yet be improved, cannot be questioned by any one of taste.

But figures aside; it is greatly to be desired that pathology should assume a character for certainty, and not be "tossed about by every wind of doctrine."

How is this to be effected? By concert of action. By investigations founded on fact, founded on ocular demonstration, and I trust we may look upon the formation of pathological societies in our own country as the harbinger of better things, the precursors of an era in medicine the brightest in its history.

Granting the necessity of observation, it is important to enquire how shall we observe? and when we have observed, how shall we reason?

I can give no better answer to these queries at this time, than simply to state, let every man observe with his own eyes; and let him reason without preconceived opinions, taking no authority as an implicit guide, only so far as his belief may rest upon moral evidence, the simple statements of credible witnesses.

With these preliminary remarks, I proceed to inquire into some of the relations existing between constitutional and local disorders.

Constitutional disease is either, 1st, temporary, incidental, (as fever,) or 2d, cachectic, (as scrofula.)

Local disease may affect but one portion of a tissue, as tic doloreux, mucous gastritis; or it may involve a variety of tissues in the disorder of a single organ, as hepatitis.

In pointing out the relations which exist between general and local lesions, I shall first inquire into the influence of temporary, incidental and constitutional disease upon local affections; second, the influence of cachectic disorder upon local affections; third, the influence of local disease upon the cachectic constitution, and fourth, the influence of a morbid diathesis upon a general affection in its original character temporary.

1. Of the influence of transient constitutional disease upon local affections. I remark, first, that general excitement of the system, whether it be actual fever in its highest grade of action, or universal nervous irritation, does oftentimes prevent the formation, or suspend the progress of local disorder. Secondly, that the same kind of excitement may, on the other hand, serve to develope a local disorder previously latent; and thirdly, that an affection truly local often assumes the peculiar character of the general disease.

In conformity to the spirit and letter of our constitution, I shall now bring forward the result of my observation, by which, with corroborative testimony, and the aid of sound principle, I trust the statements here laid down, will be fairly established.

1. Influence of general excitement in suppressing local disorder. The observation of every physician must teach him that that derangement of the system vaguely styled *fever*, often acts as a derivation, or substitute in case of existing local disease, or as a temporary preventive in case of its early formation.

A gentleman upon whom I attended not long since for gonorrhea, was taken suddenly with fever, which lasted for some eight or ten days. During this time the usual phenomena of that disease were entirely absent, but so soon as he recovered from the fever, all the symptoms previously present returned.

A gentleman partook of the luxury of sexual intercourse in Louisville some years since, and on his passage up to this city, was badly scalded on the thigh and arms. Constitutional irritation followed, and the patient complained more or less of fever every day. In the course of ten days he was discharged from the Cincinnati hospital nearly cured. On the morning of his departure he very modestly asked me for a bottle of Chapman's mixture, declaring that he scarcely knew which was worst, the scald, or the disease which had just attacked him.

The transient excitement incident to dissipation generally serves to smother, as it were, local irritation. Thus, for example, I have observed that fever induced by imprudence of any kind, during the existence of tumors and ulcers, would have this effect, though the patients would ultimately be the sufferers; for so soon as the general excitement had worn off, pain would soon announce the resumption of the local misery.

The same remark is applicable to wounds in many cases. When a local injury gives rise to what is styled by Mr. Travers, direct constitutional irritation, the part affected will at first be exalted in its sensibility, but if the constitution becomes much impaired, the various functions disordered, this sensibility is apt to be diminished, there is a suspension of morbid or of restorative action in the part, and we are compelled to look well to the system, if we would desire to know the true pathology of the case. Fever then appears to exert a contra stimulant effect in many instances, upon a topical lesion.

The irritation, at first concentrated, becomes for a while less violent by a diffusion of excitement, or again this diffused excitement may subsequently take hold of some sensible organ of the body, create a new point of irritation which seems to counteract the progress of the primitive affection.

The following is a case in point. John S—, of Indiana, had been complaining with severe ophthalmia for which he had been treated generally and locally with little or no advantage. In the early part of the fall of eighteen thirty-eight, he was attacked

with intermittent fever, and it was his constant remark, that the ague shook him so severely, he had forgotten all about his eyes. The fever continued with occasional intermissions of a week, until the early part of the winter, at which time both the ophthalmia and the fever left him. It was not long, however, before he discovered that his spleen was enlarged, so to use his own language, nothing ailed him but the "ague cake."

In the next place we are to direct our attention to the fact, that general excitement seems to develope a local affection previously This is truly a wise pathological provision. How often are we compelled to sit silently and blush at our ignorance of an obscure case? How often is our treatment of a case utterly useless, because its true pathology is in the dark, or perhaps because we know so little of this branch of our science, that we are unable to detect the deep, insidious workings of disease within, which, like old Time, "waits for no man." Here we might dwell with propriety on the subject of morbid sympathy, but it is sufficient for my purpose to remark, that a lesion of one organ is oftentimes the result entirely of lesion of some other organ proximate or remote, and again, a concurrent affection not wholly dependent upon its associate, but so connected therewith that the life of one keeps pace with the life of the other. Now it often happens, that the primitive, and the most important disorder is overlooked, either because of our consummate ignorance, or of the absence of any manifest signs. It is evident then, that so long as we cannot comprehend the pathology of a case so obscure, we cannot treat it upon any principle. We may possibly in trying a thousand rare articles of the materia medica, happen upon those which are appropriate. But what difference is there between such practice and absolute empiricism. None. We are all then, perhaps, empyrics. Quere—and a very powerful reason this for paying more attention to pathological science.

In our time of need, however, nature seems kind, and by the instrumentality of general fever, arising from the occult disease, or entirely independent of it, reveals to us the condition of our patient. We are then brought to see the character either of a

chronic affection of a single organ, without any complication, or the true pathology of a sympathetic disease.

The two following cases which occurred to me in my practice in the valley of the Wabash, will serve to illustrate these facts.

I. William Roach, who had suffered for five successive autumns with intermittent fever, complained during the summer of thirtynine of indigestion, constant constipation of the bowels, except when under the influence of medicine, hypo, feeble circulation, jaundiced skin, great tenderness of the stomach and bowels. He referred none of his complaints to the right hypochondriac region. Shortly after consulting me, he was attacked with remittent fever, and violent and continued pain in the liver told too plainly that something more than ordinary functional derangement The attack of fever was of short duration, but was at work. the hepatic affection remained, until at length upon a sudden attack of cholera morbus, he died. Upon a post-mortem examination, the liver was found adherent to the diaphragm and somewhat larger than natural, its color variable, the large lobe was of a deep black, small lobes, lobulus spigelii of a yellowish brown appearance. The consistence also varied. The great lobe was firm and compact, like Indian rubber, and with great difficulty could I penetrate its substance with my finger. The other lobes were in a state of partial softening, and at one point I saw a small cavity which seemed to have been undergoing cicatrization. The remainder of the examination I will not here report. It seemed very plain, that during the repeated attacks of intermittent fever, and in their intervals, this organ was gradually very latently contracting disease, perhaps nothing more than chronic hepatitis, but it will be remembered, that the patient made no serious complaint until the summer of eighteen thirty-nine. No local disorder of the liver was suspected, but we are led to infer, that there must have been some ancient disease, from the presence of softening and excavation in the two smaller lobes, whilst on the contrary the morbid condition of the great lobe seemed to be the work of more recent time.

The next case I have to report is one of ophthalmia from chronic hepatitis. It is well known to the members of this

274

society, that of the many sequelæ to the autumnal fevers of the west, are chronic inflammation and enlargement of the liver, with their concomitants. It must be equally well known, that these are sometimes so obscure in their nature as to elude our investigation. The case of ophthalmia which I have just mentioned, occurred in an individual, who had been living in a marshy region, and had almost subsisted on miasm. He had had frequent attacks of fever, and for some years previous to the disease of the eyes, complained occasionally of a dull heavy pain in the hypochondriac region. In the early part of last summer, he applied to me for his eyes. I treated him upon the usual antiphlogistic plan, but with little success, until he had an attack of fever, when I satisfied myself that the liver was the source of his complaint. This the fever made manifest, and after persevering efforts directed chiefly to this organ, I succeeded in curing the affection of the eyes. I come now to my last proposition. A disease truly local, when under the influence of constitutional derangement, may assume the peculiar characteristics of the latter.

That the nervous system in health should exert a predominant influence upon the various functions of our bodies, is a fact by no means surprising. Now, we would be led to conclude by analogy, that an equally powerful influence could be exerted by this system, when the body or any portion of it is in a state of disease. Derange the nervous system, and you derange the whole man. Is the common sensorium compressed or jarred? the alarm is sent to every quarter. Is it deprived of a usual supply of blood? it fails to perform its wonted office, it faints, and so does the body. Does it receive too great amount of blood? again it fails to do its accustomed work, it suspends, and so do all the tributaries. Now, in our view, the whole nervous system is chiefly and primitively concerned in those constitutional disturbances, of which we have been speaking. The nervous system seems to be the fountain-head of fever, and the material too upon which fever is always playing. It is, in a word, an anatomical impossibility that a disease should be general without perverted action, more or less of the brain, spinal marrow and nerves. These remarks are made introductory to the proposition I hope to establish, viz. that a local disorder, when under the influence of fever, or of a perverted state of the nervous system, will, in truth, dismiss some of its customary features, and assume those of the peculiar fever or nervous affection.

It will be remembered, that I consider a disease local, when it is first limited to a secondary tissue, or circumscribed to an organ or part, though involving many tissues. A positively local disease I have yet to see; the term must be used, however, to make necessary distinction between the various ills of the body.

In illustration of the proposition laid down, I will now bring forward the following cases, which came under my notice and treatment. They will show, I think, very clearly, the influence of intermittent fever, and of a depraved nervous system from this form of fever, and from excesses independent of fever upon affections which are intrinsically local.\*

I. Intermittent Hives.—A boatman of this city applied to me some years since for simple intermittent fever; he had been travelling upon the river for several months in succession, and had had numerous attacks of the disease. I treated him in the usual manner with success, and he appeared to be well and hearty. In a few days I was called to him again; he was groaning under the scorching affliction of hives; the eruption was general, and the accompanying fever high. I adopted a simple treatment, left, and promised to call again in a few hours; I did so, and learned with surprise that the eruption had entirely disappeared in an hour after my departure; again he thought he was well, but his consolation lasted only for a day, for on the next day, about the same hour, the eruption reappeared, preceded by a slight chill, and lasted a somewhat shorter time than on the day previous. I now began to think there might be some connection between his previous and present condition, and with little hesitation determined, that in the event of a similar recurrence of the eruption on the subsequent day, I would, in the succeeding intermission, make

<sup>\*</sup> These cases were originally reported in the Boston Medical and Surgical Journal, and Maryland Journal, and are now reported from memory—the Journals being loaned out.

use of such means as would be calculated to prevent another paroxysm; in other words, the system permitting it, I would treat the case precisely as I would one of intermittent fever. On the next day he had a similar attack, which lasted about two hours. His stomach, bowels, &c. being in a due state of preparation, I acted in accordance with my resolution. I administered the quinine, and the treatment fully answered the purpose. I mention the treatment in a general way, to show that the result substantiated my view of the path of the case.

II. Intermittent Dysentery.—A young lady of eighteen, who had suffered a number of attacks of intermittent fever, was taken in the summer of 1838 with dysentery. Upon my first examination, I discovered nothing more than the ordinary characters of the disease, and treated her much after the usual way. My remedies seemed to have a most admirable effect in a short time. On the day after my first visit she appeared as near well as one could become in so short a period, and so she continued until the afternoon of the third day from my first call, when she was seized with slight rigors, succeeded by heat of the surface, quick pulse, and most profuse discharge from bowels, of semimucous matter, tinged with blood. I again treated as I had before, and again she appeared to recover. On the following day well, with the exception of some feebleness. The next afternoon there was, to my astonishment, a recurrence of the dysentery, and I began to think there was some mystery about the case, which I could not comprehend.

I had never heard of this disease assuming a regular periodical character, and the case, upon the whole, seemed altogether anomalous; but that it was decidedly periodical, could no longer be doubted, and I resolved upon a course of treatment similar to that mentioned in the preceding case, with the confident expectation of success; my expectations were fully realized. The treatment was entirely successful, and I felt sustained in the view which I had formed of the pathology of the disease.

The mucous coat of the bowels becoming the seat of irritation, this irritation was without question, under the control of a general disordered constitution, or, if we please, a lesion of

innervation, which from habit, as it were, had assumed a fixed periodicity. This morbid periodical diathesis, (may I say) was conveyed from the nervous system, through the circulation, chiefly, to the bowels. At the period of excitement, the heart reacting, the arterial branch of the vascular system increasing in force, the blood rushing violently to the great surface of irritation, morbid secretion would commence its work with great activity, and during the paroxysm of excitement the bowels would discharge the matter thus generated. So soon as the period of limitation would expire, so soon as the nervous and vascular actions had become wearied, the irritation, the increased secretion and the copious evacuation, would gradually decrease; and finally, in that period, styled complete intermission, there would be a suspension of morbid action in the mucous tissue of the bowels, a subsidence of irritation, a temporary withdrawal of the whole constituting the disease under consideration.

III. Intermittent Mania a Potu.—A well marked case of this I saw two summers since, in the person of a robust blacksmith. The particulars of the case I will not describe, further than to state, that during his sickness, he took a spell of shoeing horses, and hammering on the anvil regularly once a day. No treatment seemed to have any permanent effect, until the quinine was used.

IV. Intermittent Rheumatism.—I have seen but one decided case of periodical rheumatism. The paroxysm of pain, heat and swelling, would recur regularly every other day. It was cured by the quinine, in connection with purgatives and lotions.

V. Intermittent Pleurisy.—The last case I shall mention, is one of intermittent pleurisy. The gentleman, the subject of the disease, had been residing for some years in a marshy region of country, but had never had a single attack of intermittent fever. When I first saw him he was panting for breath, and complaining with excrutiating pain in the left pleura. I bled him, and gave him a draught of sol. morphine; this, with immediate subsequent treatment, gave him relief. The next day he said he was well. The day subsequent he was again attacked, notwithstanding his precautionary measures. I enquired particularly with regard to his previous health, and found that he had never suffered a day's

sickness in his life, except slight headache. Conjecturing that the pleuritis might be a harbinger of pulmonary disease, I made as thorough an examination as I could in reference to the latter, but without any satisfactory result. This second attack lasted, not-withstanding my remedial measures, for about three hours, after which I observed a copious perspiration; the patient was again well, to use his own words, and lively the succeeding day, but the day following brought a return of the disease, at which time my eyes were open. I flattered myself that I had at this third attack, discovered the correct pathology of the case, and I imagine that the successful treatment by means adopted to prevent the return of a periodical complaint, confirmed the view.

It will thus be seen, that a local disease may exist in connection with this form of fever, and be under its influence; that a local disease will take upon itself the periodical character of an intermittent, after the actual cessation of the latter, the body having become, as it were, a stereotyped periodical; and lastly, that the nervous system may become so deranged by the operation of external causes, as to stamp a periodicity upon a local affection, independent of general febrile excitement.

I come now to the second branch of my subject, viz.—the relations subsisting between cachectic constitutional disorder, and local diseases.

By cachectic disorder, or cachexia, I mean simply what was meant in days of yore, a bad habit of body, known by a depraved or vitiated state of the solids and fluids; and I must candidly regard it a fault of modern pathology, that it has scarcely recognized this principle, so vitally important to the accurate investigation of one disease at least, which afflicts a good portion of the human family. The thanks of the profession are, I think, due to Drs. Clark and Todd of England, for their able expositions of this subject, in reference to the digestive and pulmonary apparatus. They have "laid the axe to the root of the tree," and we would hope that the physician of the nineteenth century might not rest content until he could satisfy himself of his ability to strike well at the source of those diseases deemed incurable, and

279

which fall with a withering touch upon the fairest flowers of creation.

Physiology teaches us above all things the mutual dependence of organs, and their respective functions, and one of the simplest facts in pathology is deducible from this great physiological relation, the fact to which I have before alluded. Organs are co-operative in the production of disease, sustaining to each other morbid relations, which, although not manifested with precision as in health, may enable us to study the progress of disease, its tendencies, &c. Thus may we often anticipate destruction, and stay for awhile, the hand of death.

These remarks will apply to the cachexia. Theorize as we may, upon diathesis, we have by patient observation discovered indications of a generally depraved condition of the body, which give rise to organic disease in one or more organs.

To aim at brevity and point, I will confine myself to the tuberculous constitution.

"By the term tuberculous cachexia," says Dr. Clarke, "I designate that particular morbid condition of the system, which gives rise to the deposition of tuberculous matter, on the application of certain exciting causes, which have no such effect on a healthy system." I take this, sir, to be a truth which cannot be controverted. Shall we speculate as to the exact nature of this morbid condition. I believe Dr. Clarke has not attempted to solve this, nor has any other writer with whom I am acquainted.

This is a matter which remains for elucidation. Were we disposed to deal in hypothesis, we might say, that it consisted in an imperfect exercise of that power called the "nisus formativus," in a constantly imperfect exercise of the functions of innervation, in a faulty organization of some of the chylopætic or hæmmapoetic organs; or, finally, in a vitiated state of the blood; but such speculations are inconsistent with the object of our society. We shall rejoice to see this dark spot in pathology lighted up by fact and observation, but wild conjecture will be of no avail.

What I desire especially to present for the consideration of every member present, what I would wish to see established as a truth, ever present to the mind of the physician is, that a tuber-

culous disease of one or more organs never can exist independent of tuberculous cachexia. That this depraved habit of body may be detected long before the existence of organic alteration, is a proposition that cannot be doubted. If we possess the power of comparison, if we can reason from fact and from analogy, this must be admitted.

Now, are we not too apt to think that tubercles constitute the cause, instead of the effect, in the state of constitution, and that if there are any indications of diathesis, they result from the fact, that tuberculous matter has already been deposited? I suspect many of us do. For one, I am in the habit of mingling confusedly the cause and the effect together.

From this view of the matter I have come to the conclusion, that it would accord best with good pathology to regard tuberculous deposition a local disease, bearing an essential relation to constitutional impairment. We would thus bear in mind that, to manage the lesion wherever it may occur, we are not to rely so much upon the boasted virtues of some article peculiarly adapted to a case, as upon those means which address themselves to the whole body, that the head is sick, the heart is sick, the lungs are sick; the whole man, cap a pie, is sick.

Let us now consider the influence of tuberculous cachexia on local irritation. Experience teaches us that inflammation has certain stages, which are indicated by certain symptoms, and that although irregular in their advent and duration, we are generally enabled from all circumstances, to form an accurate prognosis. And if we should fail in the latter, it may not perhaps be owing so much to the eccentricity of the inflammatory action, as to our own want of judgment. But what is the fact when local inflammation exists in that kind of depraved constitution of which we have been speaking; when we have to contend not only with simple heat, pain, redness and swelling in one part, but with a powerful morbific influence wielded by the system? Let eye infirmaries, and surgical wards answer the query. And let the inefficient practice of a thousand physicians tell the important truth, that much yet remains to be learned.

Local inflammation may exist in conjunction with tubercular

deposits in some other part of the body, or in the inflamed part, or it may exist while yet there is no tubercular secretion, but a constitutional tendency thereto. In either case the inflammation will undergo great modification. It will deviate greatly from its intrinsic character, being in subjection to a weighty influence, and in its turn will be reflected back upon the constitution.

The following case from Mr. Travers' last work on Constitutional Irritation, will illustrate this fact.

"A man aged thirty-two, had his ankle jammed, by a weight falling on the joint on a ship's deck, on the 10th December, 1814. A uniform swelling of the joint was succeeded by successive abscesses, and fistulous sinuses communicated freely with the joint, when his health decidedly failing, amputation was performed at his own request on the 10th June following. Until a few weeks prior to the operation, his appetite and sleep had remained good. He was now emaciated, and had a troublesome cough and quick pulse. His system was very little disturbed by the operation, but his cough continued without abatement.

\* \* \* \* \* On the 26th of August, he died of confirmed phthisis.

Mr. Travers styled this a case of remote inflammatory action, and with due deference to his superior knowledge and abilities, I would express the opinion that he overlooked the influence of a cachectic constitution in rendering the disease of the joint obstinate, and the fact that the excitement occasioned by the amputation served as an exciting cause to the deposition of tuberculous matter in the lungs. It is to be regretted that this writer has said so little upon the relations existing between the tuberculous constitution and local diseases. His remarks are few, scattered, and of course unsatisfactory. I am by no means satisfied that, as he has asserted, a constitutional disease may be generated by a local inflammation. I think it, however, a plain truth in pathology, that a local inflammation may, and often does develope a constitutional disease previously latent. This I believe to have been the fact in the man, whose case has just been read. This principle is further illustrated in the following case, from the same author, who styles it like the other, one of remote sympathetic action.

"A girl with chronic disease of the knee-joint, for which issues were made, and discharging, had been one month in the hospital, 25th September, 1816, when she was attacked by slight rigors, followed by perspiration and acute pain in the right side, with cough and dyspnæa. \* \* 10th October, 1816. Emaciated rapidly; 22d October, constitutional sympathy severe, local disease materially influenced by it; 16th November, amputation above the knee; 18th November, loss of appetite, hectic fever, cough, with copious purulent expectoration, &c.; 21st diarrhæa and confirmed symptoms of pulmonary disease; 25th died exhausted."

I will now mention two or three cases of my own, which, I think, will serve to illustrate the modifying influence of this morbid diathesis.

Mr. H—, a merchant of this city, was attacked the present summer with dysentery. After trying several empirical remedies for about a week, he applied to me for medical assistance. I attended him some two weeks or more, during which time he was confined to his bed. I cupped him, administered small doses of calomel and ipecac. and occasionally the hyd: cum creta, with pulv. dov. demulcent drinks, &c. &c., until I succeeded in placing him upon his feet, so that he could attend to his business. few days, notwithstanding the utmost caution, he relapsed, and again I treated him as before. Again he recovered, and again relapsed, somewhat to my chagrine. I now took a closer survey of his constitution. I had learned in the first instance, that he was scrofulous, but I did not pay any attention to the fact. I became convinced upon closer examination, that the obstinacy of his disease arose from the influence exerted upon the bowels, (perhaps through the mesenteric ganglia) of a scrofulous diathesis. I could not say positively that the glands of the mesentery were tumefied, and kept up the irritation of the bowels, for I did not see them, yet I had every reason to suppose so, from the hereditary diathesis, the every mark of a depraved habit of body, the tumefaction of the abdomen, the enlargement of the glands of the neck and throat, upon every attack of cold; and finally, by the sanative influence of the hydriodate of iron. This article was administered in solution three times per day, in gum water, and the

patient kept on a spare diet, and in doors for about three days, when all the symptoms became better. He left his room, and went to his store on the fourth day, continuing to use this preparation. In a few days he seemed entirely well, and has continued so up to this time, near three months.

I could narrate several cases of this kind, but I shall mention only one more.

J. G. B——, of Indiana, of a tuberculous diathesis, was taken down with pain of the bowels, vomiting, &c., and it was decided by myself and consulting physicians, that his disease was seated chiefly in the mucous coat of the small intestines. For this he was treated. But we were deceived in the symptoms, and post mortem examination showed a general and severe peritonitis, with enlarged mesenteric glands and tubercles of the lungs and liver. The mucous coat of the bowels was scarcely altered in any respect. He had no symptoms of peritonitis, and all the indications of any bowel affection were masked.

I come, gentlemen, in the last place, to notice the modifying influence exerted by the cachexia upon that morbid state styled fever.

Fever, in my judgment, is either essential or symptomatic. This is an opinion as good as it is ancient. We regard it a truth which will abide forever. The arguments of those who advocate the invariable locality of disease to a circumscribed spot, and its subsequent irradiation over the body have failed to convince us of any error in our old doctrine, and notwithstanding we believe that many of the opinions of this class of pathologists are correct, yet we are certain that they have taken ultra ground, which cannot be sustained in a fair conflict with truth and sound argument.

The modifying influence of the various cachexia upon both forms of fever, (essential and symptomatic) are discoverable in the perversion of the ordinary symptoms of these affections, and in the inefficient action of the ordinary remedial measures.

But we must postpone the consideration of this branch of our subject to another meeting.

## Baltimore, January 1st, 1842.

Messrs. Editors,—I offer you the histories of some cases that have fallen under my notice, and which to me were very interesting. If you deem it worth while, they are at your service for publication. I make no remarks upon them, leaving it to those who may read them to draw their own inferences from them. I however think some practical truths may be drawn from them, by comparing them among themselves, and viewing them in relation to the mooted points of pathology appertaining to the nervous system. Hereafter I may trouble you with some reflections.

Very truly, &c.

WM. M. KEMP.

# CASES OF NERVOUS IRRITATIONS.

BY WILLIAM M. KEMP, M.D., OF BALTIMORE CITY.

SINCE the experiments of Sir Charles Bell, upon the nervous system, have brought new views and new truths into the science of medicine, more modern investigators have taken up the subject with industry and commendable perseverance, and are daily adding to the amount of information already acquired. They are bringing new subjects to light, or by their experiments are confirming those already produced, and it is only in this way that we can look with hope for the day, when uncertainty and difficulty will cease to be regarded by men as characteristics of medicine. To every one engaged in its pursuits, it becomes a duty to communicate to the profession, whatever may appear to him interesting, and calculated to direct and govern the course of medical opinion, and lead to just views in pathology and practice.

Prompted by these considerations, we have been induced to throw hastily together, a few cases, in which we claim no credit for originality, as indeed there will be nothing new, but by which

we desire to draw attention to the subject, and if possible, so far as the facts will have that effect, to confirm what has been heretofore suggested. It is a disease, or a manifestation of disease, deserving very much more study and investigation than it has heretofore received, inasmuch as it really has a much greater influence in the modification of morbid phenomena, than many are disposed to admit. The nervous system, extensive as it is, entering into the most intimate structures of our organism and exercising a most powerful sway in regulating the movements of the whole machinery of life, must be liable, in no small degree, to receive impressions of morbific agents, and greatly to influence the character of disease; and that the nervous system in many of the older nosologies, was so little taken into consideration, is to us a matter of no little wonder. The blood vessels have entered largely into such systems, and have received much consideration from their founders, but is it not surprising, that the nervous system, equally, if not more extensive, has been almost passed over without attaching any great importance to its universal influence in the body?

Pathological and physiological researches are promising to give us the solutions of heretofore inexplicable conditions, and the nervous system, more fully investigated and much more clearly understood, is beginning to assume in the estimation of medical enquirers its proper rank among the great systems of which our bodies are composed.

Whilst practising medicine in Frederick city, we met with a number of patients whose cases presented the characteristics of neuralgia, in the general acceptation of the term, sometimes distinct and peculiar, at others more or less implicated with appearances tending to mask or modify that character. Since residing in this city, well-defined cases of this disease have occurred, the evidences in which, were so marked and distinctive, that it appeared not improper to give to the profession a detail of the most marked cases which we have seen, with the reflections and facts deduced from them. And if we can succeed in adding any thing to the knowledge already acquired, or confirming the opinion of

others, and thus give weight to the subject, we shall have accomplished the utmost of our wishes.

CASE I .- A young lady about fourteen years of age, of delicate frame, and great "nervousness," as it was termed, complained for several years of a pain in the abdomen, referred to a spot but little distant from the internal abdominal ring. The character and intensity of the pain varied considerably during this period, sometimes being remarkably acute, at others continuing rather as a soreness and tenderness, subject to frequent alternations. parents supposed it to be a partial ventral hernia, and at one time applied a truss, which, causing immense suffering by its pressure, could be worn but a very short time. In connection with this, her eyes were very "weak," and occasionally the seat of much But not to detail these precursors of a more severe development of disease; about the age of fourteen she began to complain of a very severe pain in the knee, which the family supposed to be rheumatism, accompanied by a slight contraction of the flexor muscles, forming an inconsiderable angle at the kneejoint. At this period I was consulted, and after having heard the history of her case previously, I declared my opinion to be opposed to that of her parents, and after proceeding to an examination of the spine, which I found tender in several points, and especially in the lower dorsal and lumbar regions, I disclosed to the family my conviction of the character of her case. evinced great astonishment. I begged, however, to be permitted to defer a positive opinion, until I should visit her the next day. I prescribed an anodyne, to be repeated pro re nata, and took my leave. On the next day I found that the anodyne had procured but imperfect ease, and now confirmed what appeared to be the case on the preceding day, that pressure on the lumbar vertebræ aggravated the pain of the knee. My suspicions were confirmed. I declared to the parents the course of treatment, in my opinion, alone calculated to offer any prospect of success, viz. topical abstraction of blood from the lumbar region, followed by an epispastic. To the operation of cupping (leeches could not be obtained) the patient urgently objected, and enlisting the parents in her behalf, I failed to convince them of its great necessity, and

was ultimately obliged to omit it. The epispastic was applied immediately over the most tender vertebra, and fomentations of an infusion of humulus and serpentaria virginia, were directed to be applied diligently to the knee. This, with the internal administration of camphorated tincture of opium and mild alteratives, constituted the amount of treatment at that time advised. In three or four days I had the great satisfaction of finding my patient "a little better," and the abraded vertebra having healed sufficiently, I directed the reapplication of the blister. I discovered several days after, that the contraction of the muscles was less extensive, and the angle of the knee also less. application of the blister had been very severe, not in aggravating the pain of the limb, but simply in a local manner, and I discovered a disinclination on the part of the patient and family to their further use. In due time, however, not appearing to observe their antipathy to blistering again, I advised the application of an epispastic to a portion of the spine contiguous to that formerly vesicated, but in this I was firmly opposed; I declared that in view of the responsibility I felt resting upon me, I dared not omit the use of blisters, without feeling culpable to a high degree of neglect of duty, and finding the patient "afraid of the drawing and pain," and begging to be indulged for a day or two, I was compelled to submit to the determination of my patient, not however, until I declared, that if I was opposed in the application of remedies further, I would, from a sense of duty, be compelled to abandon the case. The father at this time meeting with a vender of nostrums, among which was "an infallible cure for rheumatism," was persuaded by him, that this was a case of rheumatism, and would be speedily cured by it, and finally purchased a portion of it. My opinion of its usefulness was requested, and permission to use it sought to be obtained. I unhesitatingly objected, and asked them if they would endanger the life of their child by resorting to quackery; but they declared so great hostility to blistering, and so great disposition to try this "infallible," that I begged leave to discontinue any attention to the case, telling them that I could not continue to visit their daughter, and witness, and superintend the administration of

that, which I was certain was about to do irreparable injury. At this time the improvement was satisfactory, pain less severe, and knee less contracted. From this time I refused further attention. The quackery was tried, and the benefit gained by my treatment, soon was lost, and a progressive contraction of the muscles was daily producing more of an angle at the knee, accompanied by a greatly aggravated condition of the nervous system generally. Alarm now was felt, and the advice of an old practitioner requested. He declared it, as I was informed, to be coxalgia, and gave a number of medicines internally, without any benefit; the disease continued to increase in severity, and symptoms to my mind, clearly expressive of an extensive implication of the ganglionic system, supervened, such as great flatulency, irregularity of bowels, &c. &c. Failing to afford any relief, this attendant was superseded by another. At this time the flexion of the leg on the thigh was so great, that the heel was brought up against the nates, and strongly compressed there. The last attendant directed his remedies with a reference to spinal disease; but, in short, all failed, and the muscles becoming so greatly affected, the adductors and other muscles of the thigh being implicated, drew the diseased member completely transversely of the body, producing a slow dislocation of the hip joint. Her sufferings were extreme. The account of her case, given me by my friend, who last attended her, evidenced a greater degree of agony, than we could possibly conceive compatible with life for so long a time as this case endured. Finally, death closed the sufferings of this once beautiful and promising young lady. I greatly regret that no post-mortem examination was had.

Case II.—Mrs. ——, the wife of a professional gentleman in this city, about twenty-two years of age, of healthy constitution and vigor, requested my advice for an extremely painful inflammation of the right maxilla inferior and cheek. I discovered that a dens sapientiæ had just protruded, and was accompanied by a considerable degree of inflammation, which extending from the gum to the cheek, produced considerable tumefaction. I deemed it necessary to advise simply cooling laxatives, and emollient applications to the face. I learned that this lady had,

for the space of about a month, every morning, felt a "numbness" and pain in the left wrist and hand, recurring with great regularity, and continuing the same length of time daily, viz. from three to four hours. It was not sufficient to produce any great uneasiness, nor prevent her attending to her domestic concerns, which she was in the habit of superintending personally. During the continuance of the inflammation in the face, the wrist became comparatively relieved. Upon its subsidence, however, the pain recurred in the extremity as usual, about day dawn, but increased in degree. After one or two paroxysms, the pain came on with very great severity, apparently seated in the carpal extremities of the ulna and radius. The pain was described as lancinating and almost insupportable, indeed the agony was evident from the aspect of the patient, whose countenance was remarkably expressive of much suffering. She compared the pain to that produced by the rapid passage of a sharp instrument into the wrist, and could follow it along the course of the nerves into the hand. Appetite gone, evincing no disposition to take food; no thirst. Upon making enquiry into the state of her general system, I discovered impairment, and more especially of the prime viæ and biliary apparatus. Bowels disposed to moderate constipation, and a train of constitutional symptoms, referable to functional derangement of the digestive organs. The wrist presented no visible tumefaction, although a very indistinct erythematous blush could be observed on the surface. The temperature of the part was not sensibly exalted, and no febrile movements could be detected by the circulation. She complained of much disposition to vertigo in assuming the erect posture, and a tendency to faintness whilst up. Occasionally pain would shoot into the affected part, and from it into the hand and fingers, producing moments of pain, as intense as any I have ever witnessed. A careful percussion and pressure upon the spine, detected a point of particular "irritation." I prescribed hydrargyri sub. muriat, gr. xii., to be followed in three hours by a purgative draught, and took my leave for the present. After an interval of five hours returned, and found my patient "a little easier," yet still suffering much. Medicine had produced one dejection. Determined

upon the use of the moxa, but the moment the deflagration became intense, was compelled to remove it, the patient becoming refractory, and refusing to endure it. I then ordered the wrist to be enveloped in a flannel, constantly wet with the tinctures of myrrh and capsicum, applied as hot as could be borne. In the evening I again saw her, and was rejoiced to find her easy; the acute and lancinating pain gone, and only a soreness and stiffness remaining. Medicine operated six times, bringing off excessively disordered secretions. Continue local application. This was on Sunday. Monday A. M. wrist comparatively easy, but this morning at the usual time, considerable pain was felt darting from the wrist into "the ball of the thumb," which continues. Medicine of yesterday continuing to act, I advised the local application to be made sufficiently extensive to include the palm of the hand. No appetite. P. M. patient comfortable, pain in thumb gone. Four dejections to day of very vitiated secretion, giving evidence of biliary and intestinal derangement to a considerable extent. Some desire for food.

Tuesday, A. M. Pain in thumb, returned this morning more acutely than yesterday. No dejection since last evening, wrist much better, thumb quite painful. Let her have a purgative draught immediately—continue application—ate a little plain panada for breakfast. P. M. no dejection from medicine; thumb less painful, patient comparatively comfortable, complains of a "bad taste in her mouth," referable to mucous secretion being depraved.

Wednesday, A. M. No pain in thumb this morning; but at the usual hour of the paroxysm, a darting, shooting pain was felt in the finger next to the last, not so intense however as that of the thumb had been; this continued for several hours. There being evidences of intestinal oppression and disturbance yet remaining, I advised R. hydrarg. sub. mur. gr. x. pulv. gm. opii gr. ss. m. f. dos. i. to be taken immediately, and followed in three hours by a purgative. Discontinue local application; keep the hand enveloped in a single covering of flannel. P. M. Five operations from the bowels of a dark, consistent, viscid appearance, which has produced very considerable relief. Five lumbrici

were voided during the day. Patient experienced a sensation, as if something had broken loose from the colon about midway between the valve and right curvature a short time before the escape of the lumbrici. Appetite much improved, feels much better, acute pain in hand gone, soreness only remaining; is able to move the hand about and flex and extend the thumb and fingers without pain.

Thursday, A. M. Had a slight return of uneasiness in the wrist this morning, which extended in a very gentle manner towards the thumb and finger affected, scarcely amounting to pain. Disposition to further action of medicine. Appetite good.

P. M. used the hand too much to-day. Feels a pain, somewhat acute, about midway between "the ball of the thumb," and part first affected, a very slight circumscribed blush marking the exact spot.

Friday, A. M. No evacuation yesterday. Pain of yesterday more severe; ordered pulv. Seidlitz No. ii. P. M. aperient acted eight times; first evacuations morbid, last very slightly so. Free of pain, appetite very good.

Saturday, A. M. General soreness of the wrist and hand, with occasional darting pain. One evacuation this morning from medicine of yesterday. Secretions much improved. One of the interscapular vertebræ betrays a tenderness upon pressure. Appetite good.

Monday, A. M. Tenderness of vertebra more decided, pain of wrist and hand; feels a diffused soreness. Ordered local depletion from tender vertebra, followed by vesicatory. After this the appetite became excellent, sleep quiet and refreshing, secretions restored. The patient continued to convalence, having had very slight returns of uneasiness in extremity for two mornings.

Case III.—I was requested, February 24th, 1838, to visit Mrs. G——, a lady about forty years of age, of excellent general health, embon-point moderate. I found her suffering from an intense pain in the back of the head, which occasionally would extend around the ears. The pain was one of a permanent character in the back of the head, and became lancinating and

shooting only when it would extend as just stated. There was some intolerance of noise and light, pain not influenced by position of body. Appetite slightly impaired, bowels constipated, secretions depraved. Some excitement of pulse, and some little thirst. I abstracted  $\mathfrak{F}$  xii. of blood, and directed  $\mathfrak{F}$ . hydrarg. sub. mur. gr. xii. pulv. rhei.  $\mathfrak{F}$  i. m. f. dos. i. to be taken immediately and followed by a laxative, if full effects were not produced by the first. As she lived several miles in the country, I requested them to inform me of her condition the next morning before I would leave home. Accordingly, a messenger was despatched to inform me of the relief of my patient, and I did not visit her again.

March 3d. Experiencing some return of her pain, I received a note, and in reply directed a purgative; also an epispastic to the cervical spine.

7th. Experiencing a return of her pain, I was desired to visit her. Head affected much as on 24th February. Some derangement of biliary organs, no appetite, no thirst, no febrile action, a little tenderness in one of the upper cervical vertebræ. Prescribed an alternation of pills of morphia, (gr. ½ āā) with pills composed as follows: R. hydrarg. sub. mur. gr. xv. gm. fætid. gr. vi. m. f. pil. vi. at intervals of two hours. Apply a blister to tender vertebra.

8th. Pain no better. Bowels several times moved. Omit the medicines of yesterday, and put her upon full doses of opium, made into pills with sapo venet.

9th. Pain very slightly better this morning. No tenderness of cervical vertebra. She experienced a considerable mitigation yesterday afternoon, but about two o'clock, A. M. of to-day, it returned. Bowels unopened since night of seventh. Some nausea. Take pulv. Seidlitz ad purgationem, quiet nausea by soda powders, continue opiate pills.

10th. Pain evincing a strong disposition to become intermittent; had a respite of comparative, not entire, freeness from pain yesterday evening. Return this morning at three o'clock. Continue as yesterday.

11th. Intermission more perfect yesterday afternoon. Return

this morning at four o'clock. Some tenderness of vertebra today. Apply vesicatory to the spine. Let her have pills of sulphate of quinine, during intermission this afternoon every two hours, to be regularly administered until accession of next paroxysm.

12th. Vesication of spine excellent. Intermission yesterday afternoon. Return of paroxysm about two o'clock this morning. No appreciable benefit from the quinine. Remembering cases of this character reported as having been successfully treated by emesis, and satisfying myself that I could make the prescription on strictly curative principles, I directed as follows:

R. pulv. ipecac. gr. xvi. antim. and potass. tart. gr. ii. m. dissolve in tepid water, 3 iii. Take 3 ii. and repeat 3 i. if necessary in thirty minutes.\* Nothing more prescribed for this day.

13th. Solution produced free and full emesis yesterday, succeeded by several copious alvine discharges, showing an improvement of secretions. Intermission more perfect yesterday. Paroxysm came on about day-dawn this morning, but much less severe than heretofore. Let the course advised yesterday be pursued to-day.

14th. Full vomiting was effected by solution yesterday. Intermission complete, no return of pain this morning, although she feels a dulness in the part. Let her resume the quinine to-day, and to-night take fifteen grs. of hydrarg. sub. mur. at bed-time,

followed to-morrow morning by an aperient.

15th. Medicine acted well, continue quinine, no return of pain.

16th. Motions from bowels show a restoration of the secre-

tions. Expresses herself "well." Continue quinine.

17th. Well as respects the pain. Bowels not perfectly healthy in their action. Suspend all medicine heretofore used—advised R. pulv. rhei. pulv. jalap. sapo. venet. ā 3 ss. pulv. gambog.  $\Theta$  ss. m. f. pil. xx. to be taken pro re nata. No further complaint. Pills answered the purpose designed, and my patient was well.

CASE IV.—Dec. 22d, 1837, I was called in attendance to

<sup>\*</sup> After the action of the vomiting was over, take \$\overline{z}\$i. ol. ricini.

Mrs. M—, aged about twenty-five, whose general health was always remarkably good. Her complexion always indicated high health. Her case proved to be an attack-familiarly known as bilious pleurisy, with a strong implication of the nervous system. I abstracted a small quantity of blood, and directed an alterative aperient, which was followed during her attack, by combinations of alteratives, anodynes, and occasionally camphor; very soon the thoracic symptoms abated and disappeared, and towards the close of her fever, she several times complained of an excessive tenderness of a spot, about the situation of the right internal abdominal ring, which however could always be relieved by warm fomentations, and the internal administration of blue mass and hyosciamus in combination. I have mentioned this symptom because it was remarked in Case I, and the subsequent histories of the two cases shows also a contraction of the flexors of the leg. Her case terminated in perfect convalescence, excepting a slight intestinal pain which sometimes appeared, but never with much intensity. I took my leave on the 31st, and saw her no more, until

January 9th, 1838. I was called on this day in consequence of a severe pain experienced in the right glutei muscles, extending somewhat down the posterior part of the thigh. I detected no swelling, and I may here remark that no intumescence, beyond a very slight puffiness for the first few days, was at any time discovered. The seat of pain being clearly referable to the position of the great sciatic nerve, I was at once led to investigate the condition of the spine, which I found to be tender upon pressure in the lumbar portion. Not being fully recovered from the effects of her late illness, I could not think of depletion as necessary, and therefore directed a vesicatory to the lumbar spine, to be permitted to remain until the full effects of it were produced.

10th. Vesication perfect, pain no better, extends rather farther down the thigh, sometimes lancinating. There being a slight febrile development, I directed as follows: R. sp. nitri. dulc. 3 vi. tr. opii. 3 ii. m. R. acet. morph. gr. i. pulv. camph. gr. ii. m. f. pil. vi. to be administered pro re nata. I directed applications of the tinctures of myrrh and capsicum as hot as could be

borne, to be made by means of flannel, and kept constantly applied.

11th. Pain less acute. More extended down the thigh. To-day detected a very slight contraction of the knee-joint. Continue,

12th. Same as yesterday. Continue,

13th. Same as yesterday. Bowels torpid, move them with four pills, (mentioned at close of Case III,) adding to each one hyd. sub. mur. gr. i. I now directed them to keep up a constant irritation of the integuments of the posterior upper part of the thigh, by means of mustard sinapisms, changing their position at every renewal of application. Keep the lumbar region impressed by the rubefacient effect of cantharides, never permitting full vesication; changing the spot of their application every time. Warm fomentations to the knee.

18th. Every day improvement has been progressive, and at this time there is merely a diffused soreness of the parts. Knee unaffected. Complains of great weakness in the limb. Use only myrrh and capsic. as a liniment.

20th. Same as 18th. Let her take tincture of guaiac.

27th. Has been taking guaiacum regularly since 20th. At that time she was scarcely able to move the limb, and could bear no weight whatever upon it; she can now move about with the aid of crutches. Being within a few days of her catamenial period, I advised the combination of tinct. myrrh with the guaiacum. She continued to improve, but passed her period without the menses. She gradually recovered the use and strength of her limb, under the use of the guaiacum; at the next period menstruated healthily and passed from under my care. One symptom I neglected in proper place to mention, which also was remarkable in Case I, viz. a sharpening of the features. It happened that both these patients were remarkably handsome, thus making any change in their physiognomy more remarkable. In the subject of the last case, that peculiarity disappeared, early in her convalescence.

Case V.—Miss—, of good general health, but much addicted to reading, and consequently somewhat sedentary in her habits, was on a visit to Harrisburg, Penn., several years ago, and

being alarmed by an uproar in the street near the house of her uncle, to whose family she was then on a visit, felt suddenly faint and somewhat nauseated, from which however she soon recovered, and paid no further attention to the circumstances. months afterwards a fright occasioned a return of the former unpleasantness, implicating several muscles, giving rise to an action partaking of the mixed character of a gulp and hickup, so peculiar that I can find no term strictly expressive of it. This also passed off, and although she occasionally had slight returns of it, it created no uneasiness in her mind. But after her return home she experienced several attacks, and one particularly severe occurred on a Sabbath, whilst attentively listening to an interesting discourse, occasioned by unexpectedly observing an intimate friend upon whom, if my memory serves me faithfully, a chronic disease had wrought a great alteration during her absence. On the succeeding day I was called to prescribe in her case. I found a recurrence, in a mitigated form, of the paroxysm to-day. Upon the strictest enquiry I could ascertain no ailment prior to her visit to Pennsylvania, except indeed a sense of weight and occasionally soreness in the intercostal muscles, and a disposition to breathlessness upon active or protracted exercise, which she had felt, more or less, for several years. There was now however, irregularity in the action of the bowels, the periods of the catamenia disposed to anticipate their proper time, and a degree of "nervousness" which formerly she did not feel. imprudence in diet at this time would bring on a paroxysm, one of which was produced by a small piece of "sponge cake." Upon making pressure along the track of the vertebræ, I discovered points in the cervical and upper and lower portions of the dorsal spine tender upon pressure. My attention was drawn primarily to the condition of the intestinal organs.

Oct. 30th, 1838. I administered an alterative purgative, containing two grains of camphor, and assisted it by infusion of senna and magnes. sulphat.

31st. Abstracted blood from the interscapular region by means of cups, and advised internally R. pulv. rhei. pulv. jalap ā 3 ss.

pulv. gambog. gm. fætid. ā 9ss. sapo. venet. q. s. m. f. pil. xx. to be taken pro re nata.

Nov. 2d. No return except a slight one yesterday.

3d. Pain on pressure continuing, I concluded now to draw blood freely from the tender vertebræ and then apply rubefacient substances to the spine. I applied an epispastic to the back of neck. Suffice it to say that the space on which cups and blisters were applied by consecutive applications, covered the whole extent of the spine in which any tenderness was discovered. I may here remark that occasionally I was able to produce the spasmodic affection by making pressure on the most tender cervical vertebra, which I think was the fourth or fifth, as I did not then note down the particular one. The abdominal organs continued deranged in their functions, to which I addressed remedies combining alteratives, and one of the so called "antispasmodics." In this course I persevered, occasionally taking blood topically from such portion of the spine as was not under irritation at the time, and although my patient had occasionally returns of the paroxysm, they were always diminished in violence and of shorter duration.

27th. Substituted unguent. antim. and potass. tart. for the cantharides, and regulated its application in the same manner as I had done the flies. The relief was gradual, yet satisfactory, as the treatment was pursued. A mild course of alteratives with anodynes, principally blue mass and hyosciamus, was continued with reference to the derangements of the digestive organs.

In the month of December the irritants were omitted for a short time, but finding the symptoms not entirely subdued, they were renewed, and occasionally applied until the succeeding February, at which time they were laid aside, and pills of sulphate of quinine, sulphate of copper, and sulphate morphia were exhibited, and after a few weeks' use the patient ceased to receive any further attention, and has not since, to the best of my knowledge, had any indication of a return.

August, 1841. We have just seen the father of this young lady, and he assures us that from the last date of the report of this case, her health has continued uninterruptedly good, giving

the fullest evidence of the complete success of the treatment, based on our view of its pathology.

Case VI.—In December, 1834, I was requested to visit in consultation a young lady in Loudoun county, Virginia, suffering from a form of disease presenting peculiarities in its phenomena not fully explicable to the mind of the attendant. From him I learned that about three months previously, the lady had been seized with an attack of convulsions, which had been recurring at irregular intervals since. That lately the paroxysms had become much more frequent and violent, and considerable alarm was felt for the issue. The attacks would be produced by the most trifling circumstances, such as the sudden barking of a dog, violent closing of a door, sudden and unexpected entrance of a person, &c. For her relief, general venesection had been practised repeatedly, and the whole round of antispasmodics gone over, but without any relief.

Upon my arrival at the house in company with the attendant, we found her recovering from a paroxysm, which had been produced by the sudden eruption and barking of the dogs, startled by our approach to the house. We waited a few minutes before entering her room, and in this time the paroxysm had entirely passed off, to be renewed however immediately upon our admission to her chamber. I sat by the bedside and witnessed the whole scene. Upon its subsidence she was restored again to consciousness, and was able to converse very intelligibly and rationally. She became composed and entered into a description of her feelings and sufferings. After the interval of perhaps an hour, she observed that a paroxysm was approaching, and directed my attention to her foot. Her foot was drawn by the violent contraction of the muscles, into that condition recognized in deformities of that member as "talapes varus," and seemed momentarily to threaten luxation of the ankle-joint; in a moment the spasm relaxed in the foot and was clearly discernible in the gastrocnemii; beyond this, delicacy forbade my tracing it. In a few seconds more the face was observed to become flushed, which gradually subsided and was followed by the most violent palpitation of the heart I have ever witnessed. At this juncture general

convulsions supervened and continued until a borborygmus was distinctly heard in the bowels, at which moment, the spasms became relaxed, and gradually went off, leaving the patient bewildered for the space of, perhaps, ten minutes; she then recovered as if from a dream, and was perfectly sensible of all that was passing around. After an interval of perhaps an hour, another paroxysm came on, commencing this time in the hand, in precisely the same manner it had previously done in the foot, and travelling up the arm, the face became flushed, succeeded by the same violent palpitations and general muscular commotion, the decline of which, as previously, was denoted by borborygmus. Altogether, it was the most interesting case I then had ever witnessed, and I remained with this case for several hours, observing this strange complication of symptoms, and drawing from her during her lucid moments all the information she was able to communicate. In this time I witnessed five paroxysms, every one observing the same course exactly in respect to the symptoms mentioned above. Professor Dewees mentions a case under the head "Hysteria," in which the abdominal muscles became affected by spasm, followed by immense distention; neither of which, however, existed in this case. Upon making pressure over the spinal column, I detected very general tenderness, but failed to produce or aggravate a paroxysm by the firmest pressure. Although the general health of this young lady was much impaired, yet I could not but attribute the extent of her suffering in part, at least, to excessive commotion, to which the frequent paroxysms subjected her. No violence or other cause could be assigned, as productive at any time of injury to the back or spine. I stated to the attendant my conviction that the condition of her spine was the leading cause of her ailment, and I was surprised to learn that he had not explored that region. He immediately proposed to adopt any mode of treatment I would suggest, inasmuch as his efforts had heretofore been fruitless.

I advised a free abstraction of blood from the whole track of the vertebræ, to be followed by strips of blister, two inches wide, to be applied on each side of the spinal column, and to extend from

the occiput to the sacrum, and a combination of feetida and musk, with occasional alteratives and aperients internally. As the patient lived some thirty miles from my residence, and the season being uncommonly severe, I requested the gentleman to keep me advised of her condition, and if necessary, I would again visit her. He, immediately after I left him, practised local bleeding, but the patient refused to suffer the application of the blister. He also instituted the course of internal medicines advised. Foiled in his wish to apply the epispastic, he cupped more frequently, and in the course of three weeks, I was gratified to learn that she had but one or two returns of the attack, and those confined to but one paroxysm of convulsion. By vigorously pursuing the plan indicated, excepting the blisters, to which she would not submit, she was entirely relieved from any further return, and in the ensuing summer made a visit to a friend in our city, in a very tolerable degree of health, complaining of nothing but occasional lassitude. Her spirits were very cheerful, and she promised to recover the enjoyment of her former health, which, I am happy to add, she finally realised.

CASE VII.—March 23d. Called in attendance to Mrs. B—, of spare habit and delicate appearance, in an attack of menor-rhagia, or more properly, perhaps, uterine hæmorrhage. In the latter part of February suffered from a similar attack, and has had a large discharge in the two. The last, however, was arrested fully by the 28th, on the evening of which day she complained of a severe pain in the right thigh, about five inches above the knee, accompanied by one less intense in the hip; had committed an imprudence in diet, and I advised a cathartic with warm fomentations to the leg.

29th. About noon the pain, which had subsided during the night, returned with increased severity. Pulse accelerated. Let her have purgative and make application of the myrrh and pepper as hot as could be borne to the limb.

30th. Pain abated about midnight. Returned at noon to-day. Repeat as yesterday.

31st. Pain abated and wore off last night, returned to-day. Tenderness of lumbar vertebræ. Apply small-blister to tender

spine, and let her take of the following pills to-morrow morning, R. quin. 3 ss. morph. gr. i. m. f. pil. xv.

April 1st. Pain returned to-day. Apply cups to the whole of lumbar vertebræ, and afterwards an epispastic. While the cups were drawing, pain sensibly abated. Continue pills.

2d. Epispastic drew well. Slight return of pain to-day. Has

a hacking, troublesome cough, with expectoration.

3d./Complains of pain in groin extending along the femoral nerve. Apply leeches, No. xxx. Cough continues. R. opii, gr. iii. camph. gr. iv. calomel gr. viii. m. f. pil. iv. un. quaq. tri hora.

4th. Cough very troublesome. Pain in leg disappeared, has severe pain in bowels with a sensation as if a string were drawn around the abdomen. Tenderness of dorsal spine generally, pressure not increasing pain of bowels, but greatly aggravating the cough when made upon the superior dorsal vertebræ. Let her have leeches xlii. applied to the spine from upper margin of the scapulæ to the blister on the loins.

5th. Leeches relieved the pain of bowels and greatly alleviated the cough. Let her use sp. nit. dulc. and tr. opii. camph. partes equales, for cough. R. pulv. camph. gr. iv. sulph. quinin. gr. xvi. sulph. morph. gr. i. m. f. pil. viii. to begin with these pills early in the morning.

11th. Has been improving steadily until to-day. Has taken a severe cold by sitting in a current of air, caused by the frequent opening of her chamber-door whilst sitting between it and the fire. Cough has returned, and is very troublesome. Complains of a binding sensation around the thorax. R. sp. nit. dulc. tr. opii. camph. āā 3 vi. pulv. jacob. gr. xii. m. teaspoonful pro necessitate. Warm liniment to thorax.

12th. Slightly better. Secretions depraved. R. blue mass. D ss. ex. henbane gr. xv. m. f. pil. xx. un. ter in die sum. Continue as yesterday.

13th. Complains of pain above left clavicle, tender upon pressure. Vertebræ of neck slightly tender. Continue

14th. Same as yesterday; complains of pain along left side of neck; circulation accelerated. R. sp. minderer Zii. tart. emet. gr. ii. m. teaspoonful quaq. bihorâ. Epispas. ad uncham.

15th. Better in every respect. Blister produced free vesication. Omit mixture of yesterday and use nitr. dulc. et tr. opii. camph. as on 5th, for the cough that remains.

18th. Much better. Slight uneasiness of bowels, capiat haust olei ricini cum tr. opii. gtt. xv.

21st. Well. Walked out a few minutes to-day.

The pain in the bowels spoken of under date 4th, it may be well to remark, was manifested for a few minutes at one spot, and quick as thought would shift its position, not being confined particularly to any one region of the abdomen. This condition of bowels might have led me to the belief of its being "colic," had not the preceding phenomena of this case been marked by such manifest characteristics. It resembled very much more the tormina which we meet very often in severe dysenteries, but was unaccompanied by any of the other symptoms of that disease. I could not but refer the case to a neuralgia of the part, the spine being the seat of the primary central irritation; there was not here that degree of tympanitic distention which accompanies the manifestations of neuralgic conditions of the viscera, originating in central irritations of the ganglionic system.

In addition to these cases, I might give the history of others, involving the nervous system to a greater or less degree, but I have chosen those as leading evidences exemplifying, and, to my mind, verifying the truths which I may shortly attempt to deduce from my observations of this class of diseases. If I have been prolix in stating my cases, it is because I believe details should be given in these matters, and truths in medicine cannot be too minutely narrated.

TO BE CONTINUED.

[We had translated from the Encyclopædia des Science Medicale, a portion of the Aphorisms of Practical Surgery, from Dupuytren's Lectures, when we observed the following article in the Medico Chirurgical Review. We prefer using the selections of this learned editor, but may nevertheless prepare the remainder for the next number of the Journal. We wish some of our correspondents would prepare a series of Aphorisms from the Lectures of Sir Astley Cooper, and the English School of Surgery.—Editors.]

## APHORISMS OF PRACTICAL SURGERY,

FROM

### DUPUYTREN'S LECTURES.

Dr. Bigal, a pupil of the late Surgical Chef of France from the year 1818 to 1822, has published a series of aphorisms drawn from the lectures delivered by him at the Hôtel Dieu. They amount to ninety; we shall select what seem to us to be the most valuable.

- 1. When the tibia and fibula are fractured at the same time, the seat of the fractures of the two bones is never at the same point.
- 2. The fracture of the upper part of the fibula is always a direct fracture, and is never produced by a contre-coup, as Pouteau has asserted. The patients may be able to walk about immediately after the accident. It differs from fracture of the lower part of the bone, both in its producing cause, in the absence of displacement of the fragments, and, lastly, in its mode of treatment, as nothing is required for the cure but rest.
- 3. Fracture of the lower end of the radius is often mistaken for luxation of the carpus backwards, and the true nature of the accident is not discovered during the formation of the callus. It is then found that the carpus projects backwards, and the end of

the radius forwards; that the extremity of the ulna projects towards the inner side of the fore-arm; that there is a sinking in of the radius, as if it had been cleft with a hatchet; and that the inter-osseous space, so necessary to the movements of rotation, is effaced.

- 4. Surgeons are very apt to commit mistakes in their diagnosis of the different fractures to which the fore-arm is liable; and yet it is most necessary for the judicious treatment of each, to have formed an accurate opinion of what accident has taken place. The most frequent fracture of the fore-arm is that of the radius alone; next that of the two bones together; and lastly, that of the ulna alone. In the treatment of fractures of the fore-arm, it is always proper to place two graduated compresses, one on the palmar and the other on the dorsal surface of the limb, and also two splints, and a roller to be passed circularly round: this bandage has the advantage of keeping the two bones apart and of maintaining the inter-osseous space.
- 5. A fracture of the patella is never united by a perfectly formed callus within eighty days or so. The provisional callus, which exists at the end of about thirty days in other fractures, is not sufficient here.
- 6. What renders the consolidation of fractures of the patella difficult, is that the fibrous tissue, which is necessary to the formation of the definitive callus, exists on the anterior surface only, and not on the posterior surface, of this bone. The neck of the thigh-bone is nearly in the same condition.
- 7. Whenever, after forty or fifty days of the treatment of a fracture, the callus becomes painful, we have reason to fear that it either has given way, or is about to give way, and that the limb will become deformed.
- 8. Hæmorrhage from the ear, accompanied with coma, almost invariably indicates a fracture of the base of the skull.
- 9. Dislocation of the phalanges are usually very difficult to be reduced; much more so than those of large joints. The cause of this may be, that the lateral ligaments remain entire; but Dupuytren was of opinion that it was attributable chiefly to the

displacement of the tendons, and their escape from the grooves in which they play.

10. There is one sort of luxation of the shoulder, which is exceedingly difficult of reduction; viz. that in which the head of the humerus is directed inwards and upwards, and which is usually occasioned by a fall down a staircase. The displacement is to a considerable extent; the head of the bone touching the clavicle, and being situated above the level of the coracoid process.

Dupuytren determined by numerous experiments on the dead body that the main obstacle to the reduction is that the beak of this process is often entangled in the substance of some tendon or muscle; when such is the case, no mechanical effort can overcome the resistance without danger.

- 11. Various accidents may arise from falling with force upon the feet; as, for example, fracture of the heads of several of the metatarsal bones, fracture of the os calcis, rupture of the vault of the foot in consequence of the ligaments being lacerated, luxation of the astragalus, and comminuted fracture of the tarsal extremities of the tibia and fibula.
- 12. No disease is more difficult of cure than paralysis of the arm induced by dislocation of the humerus. The paralysis seems to arise from the stretching, compression, and perhaps also partial rupture of the nerves, which form the brachial plexus. Often no remedial means are of any avail.
- 13. Congenital ruptures present this peculiarity, that the seat of their strangulation is most frequently in the neck of the herniary sac, and not at the ring. Wilmer has made this remark; and Alanson also has observed, that almost all the cases, in which the stricture is situated in the neck of the sac, are cases of congenital hernia.
- 14. The strangulation at the orifice of the herniary sac is very common, whereas it rarely takes place at the orifice of the ring; this opinion is not shared by all authors on the subject. (Indeed the very opposite doctrine is maintained, we believe, by many surgeons. Were Dupuytren right, the operation of dividing the

ring without opening the sac would be almost invariably fruit-less.—Rev.)

- 15. Whenever vomiting ceases during the inflammation occurring in cases of hernia, we may be almost assured that the intestine has become gangrenous.
- 16. There are few patients so apathetic and insoucians as those affected with diseases of the urinary passages. (We should not have thought that; urinary and rectal diseases have usually appeared to us to give rise to more than ordinary anxiety and depression. This is often the case in renal disease.—Rev.)
- 17. Few diseases are more difficult to cure radically than a very tight (tres grande) stricture of the urethra. For, after the canal has been widened by the prolonged use of bougies, there is always a great tendency to a relapse of the disease. It is then that cauterization becomes useful, because we thus obtain a cicatrix moulded upon the bougie.
- 18. There are cases of stricture, &c. in which the keeping of an instrument in the urethra, instead of being a means of cure, becomes actually an obstacle to it: Dupuytren used to cite several instances of urinary fistulæ cured by the mere withdrawal of the sound.
- 19. All the diseases, which proceed from contraction of the urethra, are almost invariably the result of previous attacks of gonorrhæa. The size and force of the stream of urine gradually become less and less; then it escapes only in drops, and at length there is perhaps a complete retention—a state that is usually followed either by paralysis of the bladder, or by rupture of the urethra at some point, and the effusion of the urine into the cellular substance of the perineum.
- 20. We frequently meet with abscesses about the anus or in the perineum in phthisical patients; and it is often dangerous under such circumstances to operate, as the thoracic symptoms are very apt to increase, when the local disease is meddled with.
- 21. Ulcerations situated between the toes are usually very difficult to heal; this seems to be owing to the lodgment of the discharge, the admixture of the perspirable matter with it, and the constant contact of the ulcerated surfaces.

- 22. Of all cases of caries, the most dangerous are those in which the sternum is affected; for, when once the spongy texture of this bone becomes diseased, very troublesome fistulæ are formed, and the patient generally sinks under the effects of the disease.
- 23. Caries of the crest of the os ilii is a not unfrequent cause of symptomatic abscess in the lumbar and sacral regions.
- 24. It is a fact of almost constant occurrence, that diseases of the upper part of the thigh are felt, so to speak, at the knee, and also that those of the upper part of the humerus are felt at the elbow.
- 25. After amputation of the limbs, affections of the chest often supervene. Whenever we have cause to apprehend this occurrence, we should have recourse to blisters over the chest.
- 26. It is a curious circumstance that, in certain individuals, after lithotomy or other great operations, an abscess is apt to be formed in the calf of the leg: we cannot form any idea how this should be; but so it is.
- 27. In hospitals we often observe cases in which a succession of abscesses, in almost every part of the body, takes place, without any previous local or general inflammation. Such cases surely afford a proof of a purulent diathesis of the system.
- 28. Ambulatory or erratic erysipelas usually terminates in the formation of abscesses. These abscesses generally form without pain, and often without the patient being at all aware of their development. Such an occurrence is too frequently the image and counterpart of what is going on in some internal part; a slow inflammatory action is set up and terminates in suppuration, without either pain, fever, or any outward symptom being manifested:
- 29. It is a well-known fact that all abscesses caused by small-pox exist between the periosteum and the bone, with tumefaction of the latter, and subsequent formation of a sequestrum; but, in the majority of cases, this cause produces only a swelling of the bone with denudation. It is important to distinguish these two sets of cases.
- 30. Syphilitic oxostoses do not always disappear, although their primary cause has been entirely removed.
- 31. The sudden extension of the fingers, when they have been long bent, (in consequence, for example, of the contraction of

the cicatrised integument after a burn,) is not unfrequently followed by gangrene. The extension should therefore be slow and gradual; and we should avoid dividing or excising the bridle, caused by the contracted cicatrix.

- 32. It is not prudent to divide the frænum for phymosis during the existence of a gonorrhœal discharge, as the wound is then apt to degenerate into a troublesome ulcer.
- 33. In all diseases of the neck of the uterus, the posterior lip of the os tincæ is more deeply affected than the anterior one.
- 34. In general, in affections of the brain, the effects of purgatives on the bowels are much less powerful than usual: for example, five or six grains of tartar emetic, and several ounces of Epsom salts, will often not produce either vomiting or purging. In these cases the oleaginous purgatives, as castor oil, croton oil, &c. succeed best.
- 35. Hiccup, occurring in the course of diseases, is usually only a nervous complaint. Shivering is a much more dangerous symptom; it generally indicates the development of some internal mischief.
- 36. Patients, suffering from extensive and severe burns, have almost always a very constipated state of bowels. We should not be too anxious to remove this state, as it does not seem to give rise to any inconvenience; and, when strong purgatives are used, a most troublesome diarrhea often ensues.
- 37. In the majority of cases of fatal burns, the internal surface of the stomach and of the intestinal canal is found to be highly injected. In the treatment therefore of severe injuries of this sort, the surgeon's attention should be directed to the condition of these parts.
  - 38. Very severe burns often induce fatal tetanic symptoms.
- 39. Enemata with laudanum are the best means that we can employ to relieve the accidental and transitory delirium, which often accompanies surgical diseases.
- 40. When a cataract forms in youth, it is almost always in the membrane of the lens: whereas in old age it is the substance of the lens itself that becomes opaque.—Journal des Connoissances Medico-Chirurgicales.

### MARYLAND HOSPITAL.

WE had occasion, not long since, to visit this Institution, and were strongly impressed by the beautiful improvements which have been so judiciously effected within a few years, by the appropriation made by the Legislature for that object. The third story of the centre of the building, and the west wing have been completed, by which the original plan of the edifice has been carried out; and the improvements suggested by modern medical science in the construction of apartments for the accommodation of insane patients, have been adopted.

The old west wing was the original institution of 1797, and had gone into a condition of entire ruin, without being fit for repair, and while it diminished the accommodation of the building, destroyed the harmony of its proportions.

We have supposed it would interest the readers of this Journal, and at the same time afford an article for future reference, if we present a very condensed view of the different acts of legislation of the General Assembly of Maryland in relation to an institution, in the prosperity of which we have always taken a deep interest—an interest which is, without doubt, shared by the entire community.

In 1812, on the presentation of a memorial by Drs. Colin Mackenzie and James Smyth, an act passed the Legislature in relation to the Maryland Hospital, appropriating \$5,000 to be paid for three years, and providing that pauper lunatics from the counties should be received on the same terms as lunatics were received from Baltimore city.

In 1813, an act passed authorising the chancellor, on proper application, to commit lunatics and idiots to the Maryland Hospital.

In 1816 an act passed, to incorporate the Maryland Hospital, and appointing a president and board of visiters:—and in the same year a resolution was passed authorising Drs. Colin Mackenzie and James Smyth to borrow \$5,000 per annum for six years.

In 1817 an act passed, authorising the levy courts to remove pauper lunatics from the counties to the Maryland Hospital—and providing that the county pay \$100 per annum for each pauper lunatic so removed. And in 1824 an act supplemental to this act was enacted, defining what description of persons were to be considered as pauper lunatics.

In 1827, the Legislature passed an act authorising the conveyance of the claims of the city of Baltimore to the Maryland Hospital, to the president and board of visiters of said hospital, in virtue of which act the hospital became the property of the state of Maryland.

In 1828, an act was passed to incorporate the Maryland Hospital, as the property of the state, appointing a president and board of visiters. In 1832, a resolution passed, authorising the treasurer to pay to the president and visitors \$5,000 for repairs.

In 1835, a resolution passed appropriating \$15,000 to the hospital, to be paid in three annual instalments.

In 1839, Dr. S. Collins, a delegate from Baltimore city,—as chairman of a select committee sent to inspect the hospital, made a report, in which he reviewed the subject of lunacy as existing in the state, and detailed the condition of the institution; and recommended, on behalf of the committee, an appropriation of \$30,000 for its completion, with a view ultimately to its exclusive use as a lunatic asylum; and providing that, when completed, one half of the institution be appropriated to the accommodation of pauper lunatics of this state; the county paying, as heretofore, \$100 per annum for each pauper lunatic sent to the hospital. The appropriation of this sum, with these conditions, was made, and to its judicious application by the president, Dr. Stuart, and the board of visiters, we are indebted for the improvements recently made in this noble institution. The provision for lunatics in this state does not afford accommodation for the whole of that unfortunate class of our citizens: but in the present embarrassed condition of our state finances, nothing further can be accomplished. We hope that, at some more propitious period, the friends of humanity will bring this subject before our Legislature.—[EDITORS.

# ARMY REPORTS.

# Surgeon General's Office, November 15, 1841.

Sir:—In obedience to your instructions, I have the honor to	
report the operations of the medical department during the fiscal	
year ending the 30th September last.	
The amount of the appropriation for the medical and	
hospital department remaining on the 30th Sep-	
tember, 1840,	
In the hands of disbursing agents, was -	<b>\$7</b> 40
In the treasury of the United States -	36,163 45
Amount appropriated by the act of Congress of the	
3d March, 1841	28,000 00
And the amount arising from the sale of damaged	
surgical instruments, books, &c	208 31
	C4 070 1C
	64.379 16
Of this sum there has been paid during the past year	
at the treasury,	
On account of the pay and other claims of private	
physicians	\$4,769 79
On account of medical and hospital supplies -	4,471 57
And by disbursing agents for medical and hospital	
supplies, books, printing, &c	27,788 76
	07 000 10
	37,030 12
Leaving a balance on the 30th September, 1841,	
In the hands of disbursing agents	\$626 95
And in the treasury of the United States -	26,722 09
	\$64,379 16
	10.010

As the balance of the appropriation for erecting hospitals at military posts, is reported by the quartermaster general, and the returns are made to his department, it is not deemed necessary to notice it in this Report.

The number of cases of sickness which have been under treatment by the medical officers of the army, and private physicians employed in the service of the United States during the year ending the 30th September, was 38,559; 37,499 of which occurred within the year, 1,060 being cases that remained the preceding year.

Of the whole number of persons reported sick, 36,374 have been restored to duty; 320 have been discharged the service; 30 have deserted; and 387 have died.\*

From the quarterly reports made to this office by the medical officers, the mean strength† of the army for the last year is estimated at 9,748; and as the number reported sick during this period was 38,559, it will appear that the proportion of cases to

#### \* The deaths were from-Intus. susceptio..... Ascitis..... 2 Feb. quot. intermit... 1 Feb. tertiana intermit. Catarrhus ..... Hydrothorax..... Feb. congestive..... 21 Bronchitis acuta..... Rheumatism chronic. 7 Pleuritis ..... Arthritis..... 1 Pneumonia..... 12 Pernio ..... Feb. cont. com..... 1 Hemoptysis..... Phiegnon and abscess Feb. typhus...... 10 Phthisis pulmonalis.. 38 Feb. Icterodes..... Ambustio ..... Hypertrophy of heart Vulnus incisum.... Marasmus..... 1 1 Erysipelas..... 1 Meningitis..... 2 Vulnus sclopeticum.. 14 Apoplexia..... Contusio..... Gastritis..... 1 3 Congestio cerebre.... Pericarditis..... Peritonitis..... 4 1 Peritonitis acuta.... Tetanus..... Ophthalmia..... 1 1 Hæmorrhois..... Dysenteria acuta.... 38 Mania.... 1 Dysenteria chronica.. 55 Delirium tremens.... Scorbutus ..... 3 Dry gangrene..... Diarrhœa...... 44 Nephritis..... 1 1 Obstipatio..... Syphilis consecutiva.. 1 Morbi varii.... Hydrocephalus..... Cholera ..... 1 1 Intemperance..... Hepatitis chron..... Anasarca..... Cause not reported... Total, -387.

† Whatever discrepancy there may be between the strength here given and that reported by the adjutant general, will be accounted for by the circumstance that the above only includes the officers and men at posts, &c., whence medical reports are made.

the number of men in service, was nearly as 4 to 1, or 396 per cent. The aggregate of deaths was 387, exhibiting a ratio of mortality to the number of men of 1 to  $25\frac{1}{5}$ , or nearly 4 per cent., and the proportion of deaths to the number of cases treated of 1 to  $99\frac{2}{3}$ , or a fraction over 1 per cent.

Beside the diseases incident to the climate and the service in Florida, the epidemic fever, which has proved so fatal at the south during the past season, has also prevailed among the troops serving in that territory. The average strength of the army in Florida during the year being about 4,738, the number of cases of sickness amounted to 21,027, exhibiting a proportion of cases to the number of officers and men of nearly  $4\frac{1}{2}$  to 1, or 443 per cent. The deaths being 254, presents a ratio of mortality to the number of men of 1 to  $18\frac{2}{3}$ , or  $5\frac{1}{4}$  per cent.; and the proportion of deaths to the number of cases treated, of 1 to  $82\frac{3}{4}$ , or  $1\frac{1}{6}$  per cent.

The medical and hospital supplies for the army during the past year were transmitted to the several posts, and received in good order. Being carefully selected by a highly competent and faithful officer of the department, they were of the best quality, and purchased on the most favorable terms.

These and other supplies have been regularly accounted for by the required returns of the medical officers, which have all been examined, with the exception of four or five, and settled to the 30th of September.

All the officers of the department but one, are on duty or under orders for their respective stations. This circumstance, while it evinces the commendable zeal and efficiency of the medical corps, is the more gratifying, when it is considered that they have so largely participated in the exposures and privations of the camp and field.

The annual medical board for the examination of assistant surgeons for promotion, and of candidates for appointment, convened in Philadelphia in May last. Of the former, four were examined, and three found qualified for promotion.

Twenty-six candidates were invited to appear before the board, of which number twenty-two presented themselves, three

voluntarily withdrew, three did not come within the prescribed regulations, two absented themselves, fourteen were examined, and six approved. The latter have all been appointed.

The system of examination, both for appointment and for promotion, which was adopted by a regulation of the department in 1832, and confirmed by legislative authority in 1834, has now been in operation sufficiently long to test its value, and establish its eminent wisdom.

Respectfully submitted,

H. L. HEISKELL,

Acting Surgeon General.

Hon. John C. Spencer, Secretary of War, Washington.

### MEDICAL DEPARTMENT.

### ORDERS FOR 1842.

Assistant Surgeon B. M. Byrne, assigned to duty at Fort Hamilton, N. Y.

Medical Staff with the Army in Florida, Jan. 1, 1842.

### SURGEONS.

B. F. Harney,
Lyman Foot,
P. H. Craig,
R. S. Satterlee,
E. Macomb,
A. M. Elwes,
Burton Randall,

Medical Director, Tampa.

Fort Marion.

General Hospital, (West.)

Fort Shannon.

Tampa.

Micanopy.

Fort Stansbury.

#### ASSISTANT SURGEONS.

Benj. King,
Joel Martin,
John Emmerson,
John B. Wells,
William Hammond,

J. H. Bailey,L. A. Birdsall,J. McCormick,J. R. Conrad,

John Byrne,

D. C. De Leon, B. W. Woods,

J. W. Russell,

H. H. Steiner,

J. C. Glen,

H. E. Cruttenden,

James Simmons, J. C. Madison,

W. H. Van Buren,

J. K. Barnes,

Levi H. Holden,

John S. Griffin,

R. F. Simpson,

W. E. Fullwood,

Charles W. Stearns,

R. S. Holmes,

General Hospital, (East.)

Fort Pierce.

" Lauderdale.

" Wacassassa.

" White.

" King.

" Simmons.

" Gamble.

" Russell.

" Brooke.

" Barbour.

" Harvie.

" Dallas.

" Tampa.

" Rosa.

" Wacahoota.

"Garner.

" Oscilla.

" Mellon.

" Brown.

" Moniac.

"Wheelock.

" Niles.

" Fanning.

" Harrison.

" Macomb.

# NAVAL.

## NAVY DEPARTMENT, 4th January, 1842.

THE Board of Naval Surgeons, recently convened at Philadelphia for the examination of Assistant Surgeons for promotion, and of candidates for appointment as Assistant Surgeons, has adjourned *sine die*.

Assistant Surgeon A. J. Wedderburn was passed for promotion.
The following is a list of the candidates reported for appointment as Assistant Surgeons in the order in which they stand:

- 1. Morris B. Beck, of Virginia.
- 2. J. Francis Tuckerman, of Massachusetts.
- 3. Oscar F. Baxter, of North Carolina.
- 4. Lewis J. Williams, of Maryland, and
- 5. Marius Duvall, of Maryland.\*

#### ORDERS FOR 1842.

Jan.

- 6—Passed Assistant Surgeon A. J. Wedderburn, receiving vessel and rendezvous, New Orleans.
- 10—Surgeon G. W. Codwise, rendezvous, New Bedford.
- \* These gentlemen have since been appointed Assistant Surgeons, by and with the advice and consent of the Senate of the United States.
  - Dr. Beck's commission dates December 2d, 1841.
  - Drs. Tuckerman, Baxter, Williams and Duvall, each January 25th, 1842.

# MEDICAL LITERATURE.

### HISTORY OF JEWISH PHYSICIANS.

BY E. CARMOLY.

(Continued.)

§ XXX.

ABEN ESRA.

Although the prohibition anciently made against Christians consulting Jewish physicians in cases of disease, had been renewed in Christian Spain, the king of Leon had, nevertheless, in defiance of it, at the beginning of this period, an Israelite physician, to whom he granted his whole confidence. It was to this doctor, that even the estates of the kingdom addressed themselves to use his influence with the king to dissuade him from an alliance with Arragon. No one who knew the impetuous character of the prince dared to address him on this subject—the Hebrew doctor alone made known to him the wishes of the nation.

Aben Omar ben Kamenil, was a very distinguished Spanish physician of that period, and has been celebrated by Mousa-ben Esra de Grenada;\* but his glory soon faded before that of Aben Esra.

Abraham ben Meir Aben Esra, was born at Toledo in the year 1092, of one of the most learned Jewish families of Spain.

<sup>\*</sup> Depping Les Juifs. dans le moyen age, p. 93.

Nature had gifted him with a vast genius, which grasped almost all the sciences.\*

He was versed in philosophy, astronomy, mathematics, medicine, grammar, and poetry. He delighted very much in travelling, and passed most of his life in that way. After having traversed France, Italy, Greece, Palestine, Syria and Persia, he returned to India, where he was made prisoner. Having escaped this danger, he returned to Europe, visited England and other countries, and what is very extraordinary, he composed his principal works during these expeditions.

For a long period the reputation of the writings of this great man has been established. We notice among them an unpublished work upon Theoretical and Practical Medicine, divided into nine parts. This work, which appears to have been composed in Arabic, is found in the Hebrew tongue, with other medical manuscripts, in the Royal Library of Paris, ancien fonds, No. 381. It is entitled Sefer ha Nisionot, book of proofs, because the author only treats of remedies which have been tried and approved. We should not confound this writing with a treatise on Judicial Astrology, which bears the same name, and is found in MSS. in the library of Oppenheimer, at Oxford.†

With regard to the period of the death of our Aben Esra, so contradictorily reported by his biographers, behold what we have read at the end of his Commentary on the Pentateuch, an old MSS. in the Royal Library of Paris.‡ On Monday the first day of the month, Adar, in the year 4927, (February, 1167,) the wise master, Abraham Aben Esra, died. He was about sixty-five years of age, but when he perceived the approach of death, he composed for himself an epitaph, in which he took for a text, a part of the fourth verse of the xii. chap. of Genesis. Abraham was sixty and five years of age when he departed from Haran, as much to make an allusion to his own age as to give another sense to the word me Haran, of Haran.

<sup>\*</sup> LE DIVAN, No. 174.

<sup>†</sup> See the Catalogue edition of 1785, 4to. p. 14; and edition of 1826, 8vo. p. 404, No. 1175.

<sup>†</sup> Hebrew MSS. ancien fonds, No. 99.

He changed it into me Haran, and added to it the word af, which signifies full of grief; as much as to say, he, Abraham, was sixty and five years of age, when he left this sad and miserable world.

### § XXXI.

#### ABEN TYBBON KIMCHI.

The fall of the Ommiades, and the wars between the Mohammedans and the Christians, drove many of the learned Jews of Spain into the middle provinces of France, where they carried their science and knowledge into the Jewish schools, which were already distinguished. We place at the head of these learned emigrants, Jehuda Aben Tybbon and Joseph ben Kimchi.

Jehuda ben Saül Aben Tybbon, was born at Grenada, or as this city is called in the Hebrew, Rimon. He has received the merited title of Abi ha Maatikim, the father of interpreters, from his ability in translating the Arabic writings into Hebrew. He translated, very satisfactorily, the works on Grammar, of Eben Djanah, the philosophic books of Saadia Gaon and Jehuda ha-Lewy, the moral writings of Solomon ben-Gabirol and of Bechai ben-Joseph.

These excellent translations were made at Lunel, where this learned man lived in retirement, and where he still lived as late as 1199, the period at which he finished the work of Bechai. He was himself the author of various works, among which we notice two literary epistles, the manuscripts of which, are found in our library.

One of these entitled Igheret ha-Musar, addressed to his son Samuel, who was also a physician, and of whom we shall speak again, contains many particulars on the condition of medicine. Among other things, he recommended one day in each week to be devoted to the study of pharmacy, to study botany thoroughly, and to make use of no remedy of whose virtue he was not well acquainted. From which it resulted, that at that period, in France, the physician was likewise a pharmaceutist, as was the practice then, and still is among the Arabs.

Benjamin of Tudela, makes mention of our physician in the first chapter of his voyages, also of Joseph ben-Isaac ben-Kimchi, who was established at Narbonne, when this traveller visited that place about the year 1160. He was like his countryman Aben Tybbon, (a translator and physician,) who quotes him in the preface of his translation of the book of Bechai. Joseph Kimchi is better known as a poet, grammarian and commentator, than as a translator and physician. He has written numerous works upon various subjects, but none of them up to our day, have been honored by being printed. We would cite as the most remarkable, his Commentaries on the Bible, his Polemical works against Christianity, his Hebrew Grammar, and his Moral and Sacred Poems. Many of these writings which we have seen in manuscript, deserve to be better known, particularly his works on grammar, which are often quoted by his son, the celebrated David Kimchi.\*

With regard to the school of Montpelier, Benjamin of Tudela, who visited it when on his tour in France, in speaking of the Rabbis of that city, does not mention any one of them as being a physician; probably at that period the practice of this art was interdicted by the intrigues of the priests. It is not until 1180, that William VIII, Lord of Montpelier, passed an edict for their protection; by which, privileges were granted to all persons without exception, to profess the science of medicine in the university of Montpelier. Therefore, from that period, Jewish physicians became numerous in that city, as we shall see in the following paragraphs.

## § XXXII.

CHANANEL, SALOMON HA MIZRI, ELIE BEN JEHUDA.

We have just spoken of Benjamin of Tudela, and his travels, in reference to the physicians of France. As this traveller mentions other Jewish physicians, we shall follow him into Italy and Greece. In Italy he first visited Ponzoles, where there are

<sup>\*</sup> Michol. Venice edition, 1645. Pages 55, 68 and 167.

warm baths. "Whoever bathes there," says he, "will find himself cured or relieved; therefore, all the sick of Lombardy came thither during the summer." He then went to Salernum, where he visited the celebrated medical school. He found many learned Rabbis in that city; but none of them, as far as he could discern, taught medicine any longer.

It was only at Amalfi, a half day's journey from Salernum, that he met with a Rabbi who practised medicine, named Chananel. Benjamin, (while he presents him to us as the only Rabbi professing the healing art in Italy at that period,) preserves silence in reference to the works of which he is the reputed author. Nor does he give us more copious details in reference to the literary works of Solomon ha Mizri, physician of the Emperor Manual Comnena; all that he tells us is, that this physician was in great favor with the emperor, and that owing to his influence, the Jews of Constantinople enjoyed a great amelioration in their servitude, which was then very severe, particularly in Greece. For example, no Jew dared to mount a horse, except the imperial physician.

Another physician of Constantinople, of the time of Benjamin of Tudela, was Elie ben Jehuda, chief of the Karaite community of that city. He is probably the son of the celebrated Jehuda ben Elie Hadassi, author of a great work, written at Constantinople in 1140, on the Precepts of the Karaites.\*

The Karaites, as is known, are those Jews who profess their belief only in the text of the holy Scriptures, and consider it the sole rule of faith for their guidance. They consequently reject all the dogmas and traditionary rites and laws. This Jewish sect has produced many distinguished physicians, principally during the third and fourth century. Their doctors imitated in that respect the Rabbis, who were frequently in the habit of uniting to their rabbinical duties the practice of medicine, because the profession of a Rabbi did not afford them any means of support.

<sup>\*</sup> See Mardochee ben Nisim, Dod. Mordechai, chap ii, p. 13. Vienna edition.

### § XXXIII.

#### MOUSA BEN MAIMOUN.

Finally, we have to speak of a physician who brought to the study of the Hippocratic art all the elevation of a great genius, and who has been called by an Arabian author by the just title of Phænix of his age, in the art of medicine. We mean Mousa ben Maimoun. Moses, son of Maimoun, or rather as he is called by the Arabians, Abou Amran Mousa ben Maimoun, Abou Amran ben Abdallah; better known by the name of Maimonides, was born at Cordova, the 14th Nisan, 4895th year of the creation, which corresponds with 31st March, 1135, of the common era. His education was carefully directed by his father Maimoun, celebrated for his knowledge, and who took care to instruct him at an early age. He was judge of Cordova, and this office, which he discharged with great credit, was almost hereditary in his family.\*

The young Maimoun did not confine himself to the study of the Mosaic law, he desired also to unite with it the study of philosophy and medicine, which were then taught in other Jewish schools of Spain. If we can credit Leo Africanus, he also frequented the Arabic schools, and attached himself especially to Abou-Djafar Ebn Thofaïl, who perceiving his decided taste for the sciences, and his happy qualities for their cultivation, advised him to put himself under the care of the celebrated Ebn Rochd, to whom he recommended him. But no Jewish biographers mention this particular; on the contrary, they say that it was Maimoun that taught the Arabs.

However that may be, Maimonides at a very early age, composed many commentaries upon the Talmuds of Babylon and Jerusalem, a work on the calendar, and an apologetical discourse in favor of those coreligionists, who were forced in 1160 to embrace Islamism.†

<sup>\*</sup> Pocock. Prefect ad Portam Mosis, p. 2.

<sup>†</sup> De Medicis et Philosophis Arabibus et Hebræis, chap. xxviii.

Having been himself compelled publicly to acknowledge the religion of Mohammed, he determined to leave his country. He took refuge in Egypt, and there passed the remainder of his days, from whence he obtained the surname of the Egyptian. He in this country first engaged in commerce,\* but his talents were soon discovered and appreciated; and he was appointed physician to Alfadl-al-Rahim. More recently in 1179, he was invited to the court of Sallah-Eddin, who appointed him his first physician. Maimonides had great influence with this prince and his successor, on account of his profound knowledge of the healing art. Ebn-Abi-Osaïba, (who dedicates to him an article in his history of physicians,) says, that he held the first rank among the physicians of his time for theory, as well as the practice of his art. He was also, he asserts, very learned in the sciences, and had a profound knowledge of philosophy. The Sultan Melikal Naser Sallah-Eddin made it a great point to have his services as a physician—he was also physician of Melik-Alaf Ahal, son of this prince.

This employment occupied much of his time, as he testifies by a letter addressed to Samuel Aben Tybbon.† It was his duty to go daily in the morning to visit the Sultan, and if this prince, or any one of his children, or females were sick, he was not permitted to leave the palace. But the greatest inconvenience to him was caused by his delay at Fostan, which was three quarters of a league from Cairo where the Sultan resided. He generally did not return to his own house until in the evening. He found on his way home a great multitude of Mohammedans and Jews of all conditions, that awaited his return.‡ He received them kindly, listened attentively to all the particulars of their diseases, and prescribed such remedies as he judged most suitable for a cure. These consultations detained him until night, and often he was so exhausted that he was scarcely able to articulate. It sometimes

<sup>\*</sup> ABOU FARADJ, Histor Dynastiar, p. 298.

<sup>†</sup> IGHERET HA RAMBAM, Prague Edition, 1726, p, 15.

<sup>‡</sup> This is doubtless the prince known in the history of his crusades, by the name of Saladdin.

happened that he was overcome with sleep through excessive fatigue.

After having fulfilled a career so active, and so beneficial, he died 20th Tebat, 4963, or the 13th of December, 1204, aged about seventy years, full of glory, honor and learning; for, if the practice of his profession occupied much of his time, he made up for it, by an energy and industry which triumphed over all difficulties.\* His works are numerous; we intend to speak only of those which have been composed on medicine.

## § XXXIV.

#### HIS MEDICAL WORKS.

The following is an account of the medical works of Maimonides.

1. Medical Aphorisms, extracted from the works of Hippocrates, Galen, Al-Razi, Ebn-Masoué and Al-Suzi, a work divided into twenty-five books, translated from the Arabic into Hebrew, by Nathan Hamaati, a copy of which is found among the Hebrew MSS. in the Royal Library of Paris.† This Hebraic version which bears the title of Perki Moscheh had been published some years before at Lenberg in quarto.

There was a Latin translation of it which appeared for the first time at Bologne, in 1489, in quarto, and subsequently at Béle, in 1570, in octavo. Imanuel Aboab testifies that he heard a skilful physician of his time, and particularly Mercurials say, that the Aphorisms of Maimonides were not inferior to those of Hippocrates.† This was doubtless, observes De Boissi, the finest eulogy that could have been pronounced. Réné Chartier has inserted in his edition of the works of Galen some fragments

<sup>\*</sup> Maimonides was called by the Jews the doctor, the great sage, the glory of the west, the light of the east, and rated only second to Moses; they often designated him by the four letters, R. M. B. M.—Rabbi, Moses, Ben-Maimoun, whence the name Ramban.—Vide, Encyc. Americana Transl.

<sup>†</sup> Ancien fonds, No. 367. ‡ Nomoloz, P. ii. c. xxiv. p. 294.

<sup>§</sup> Dissertations critiques, etc. xiv. p. 502.

in Latin, extracted from the aphorisms of our doctor.\* It is perhaps the same as the following work.

- 2. Abridgement of the sixteen books of Galen, an Arabic work quoted by Ebn-Abi Osaïba. See how Ebd-Allatif, who saw our physician at Cairo, speaks of this work: "Mousa ben Maimoun came to see me. I recognized in him a man of very superior merit, but governed by the desire of holding the first rank, and paying his court to persons in power. He has composed a treatise on medicine, in which he collected the most select portions of the sixteen books of Galen, and five other books. He laid down a rule for himself, to change nothing in the expression, even of the writing, from which he extracted, unless it might be a conjunction or participle. Contenting himself solely with selecting the texts which he wished to form a part of his extract."
- 3. Treatise on Hamorrhoids and their treatment. A work quoted by Ebn-Abi-Osaïba, and translated from the Arabic into Hebrew, by Samuel Aben-Tybbon. This treatise which De Rossi† believes unknown, is found in MSS. at the Royal Library of Paris, ancien fonds, Nos. 367 and 393. The original Arabic is preserved at the same depositary, No. 412.
- 4. Consultation upon the snuffling of the nose and throat, produced by the abundance of the humors and phlegm which descend from the brain, translated from the Arabic into Hebrew, by the same, and in MSS. following the treatise on Hæmorrhoids.
- 5. Treatise on Poisons and Antidotes, quoted by Ebn-Abi-Osaïba. The Hebrew version of this work made by the same Abon-Tybbon, is likewise found in MSS. in the code 367, of MSS. in the Royal Library of Paris.
- 6. Treatise on Coition. A work in which he treats of the aliments and medicines which provoke to lust, &c. A Hebrew translation of this treatise is found in MSS. in the same code 367, of the Library of Paris, and that of De Rossi at Parma.
- 7. Treatise on Asthma, and the proper medicines to cure it, translated into Hebrew, in MSS. in the same Libraries.

<sup>\*</sup> Galen Oper, book ix. p. ii. p. 395, 405. † Dizionario Storico, vol. ii. p. 33. † Dizionario Storico. The number of the code of the Library of Paris is 413, of the ancien fonds.

- 8. Commentary on the Aphorisms of Hippocrates, translated from the Arabic into Hebrew, by Moses Aben-Tybbon. This version which exists in MSS in many public libraries, has served as the basis for the Latin translation of this work which has been published.
- 9. Of the Regimen of Health, dedicated to the Sultan, who reigned in Egypt. Moses Aben-Tybbon has translated it into Hebrew, under the title of Ha-Naghat ha-Beriot; the Royal Library of Paris, is in possession of a copy of it in Arabic and Hebrew characters.\* There has been a Latin translation made of it, which has been published very frequently, and among others at Augsburg, in 1518, in quarto. This is probably the same work as the following.
- 10. Treatise on the Preservation of Health, composed for Melik Alafdhal, son of Melik al-Nasar Salah-Eddin Yousou ben-Ayoub, and quoted by Ebn Abi-Osaïba.

## § XXXV.

### THE REMAINDER OF THE WORKS OF MAIMONIDES.

- 11. Hebraic translation of Ebn-Sena, as found in MSS. in the Library of the Dominicans at Bologne. The title page of this magnificent copy, adorned with three very fine miniatures, conveys the information, that this translation was made in Egypt by Moses, son of Maimoun, conformably to the Arabic copy, which he had received from the Sultan in the 4946th year of the creation of the world, that is to say, in the 1186th year of the common era. P. Montfaucon who has seen it, says, there is at the end of the code, a letter written in Italian, in which it is related, that Ferdinand I. offered two hundred ducats for this manuscript, which he desired to have in his possession, but that his offer was not accepted.†
- 12. Explanation of Drugs. An Arabian Pharmacopiæ quoted by Ebn-Osaïba.

<sup>\*</sup> Hebrew MSS. ancien fonds, No. 462. † Diarium Italicum, c. xxvii. p. 402.

- 13. Medical Consultations, composed for a prince of his time, who was a valetudinarian and hypochondriac; who sometimes had giddiness and disorders of the brain. This work is divided into four parts, in the first Maimonides treats of regimen and of general rules for the preservation of health. The second is devoted to the proper regimens for the sick, whether one may be within reach of a physician or not; the third relates to the particular regimen of the prince to whom the work is addressed; the fourth contains many salutary directions in relation to medicine, as well for those who are in health, as those who are sick. A Hebrew version of this work, very rare and unknown to most of the book collectors, is found in MSS. in the Royal Library of Paris, ancien fonds, No. 413. It has been translated from the Arabic into Hebrew, by Moses Ebn-Tybbon, as is asserted by the editor of the Book Zeri ha-Jagon in his first note.
- 14. Mode of curing those who have been bitten by venomous animals, or who have been poisoned; a work quoted by d'Herbelot.\* A Hebrew translation of this treatise is found in the Royal Library at Paris, No. 367, and in that of De Rossi, No. 1280, from which it appears, that Maimonides composed this treatise in 1198, by order of the Sultan of Egypt.
- 15. Treatise on the causes of Diseases; an Arabic work in the Bodleian Library.†
- 16. Sefer Refuot, book of medicines; he quotes it in his great work Mischna Tora.‡ Sabtai asserts, that it is found in MSS. in the Imperial Library of Vienna,§ and according to Consorti, it is the same as the Perké Moseh.
- 17. Sefer ha Nimza, || the foundling book, a work which treats of medicine, natural history and morals, printed at the end of the writings of Abraham Chajoun of Samuël de Vidas at Salomia in 5356, (1596) in quarto.
- 18. We find also scattered throughout the numerous works of our doctor, very important notes on medicine. The 5th chapter of his *Mischna Tora*, among others, is entirely devoted to this art.

<sup>\*</sup>Bibliothéque Orientale, word Mecalat al-Fasliat. †See De Rossi Dizion, ii. p. 33. ‡Book I. Treatise ii. chap. v. § 21. § Schissé Jeschením, p. 71, No. 35. || Azulai, Vaad la-Chachamim, book I. L. Hè No. 4.

19. Abridgment of the work of Ebn-Sina, an Arabic work in the Escurial Library.\*

There exists also under the name of Maimonides, some MSS. books of medicine, both in Arabic and Hebrew, of which it would be useless to speak, because these are only the same works, under other titles.

Thus the abridgment of the twenty-one books of Galen, quoted in the Arabic Library of the philosophers, is nothing but an abridgment of the sixteen books of Galen, mentioned by Ebn-Abi-Osaïba, and Ebn-Allatif, for this last says expressly, that this work contains also the five other books. We have already expressed our opinion, that this work is the same as his aphorisms, although this last book is composed, in our MSS. both in the original Arabic and in the Hebrew translations, (the Latin version has twenty-two books) of twenty-five books.†

## § XXXVI.

### EBN-DJAMI, EBN-MELKA.

Egypt had still a Jewish Physician worthy to hold a place near to Maimonides; his name was Hebat-Allah-ben-Djami Israeli, or as the Hebrews translate it, Nathaniel Israëli.‡ He was born at Fostat, and like Maimonides, was attached to the service of Selah-Eddin, and like him was held in high favor by that great prince.

<sup>\*</sup> Casiri, book I. p. 292.

<sup>†</sup> Maimonides was also the author of other writings, besides the medical, which were much esteemed. The most celebrated is his Moreh Nevochim, (the Teacher of the Perplexed,) an attempt to reconcile the doctors of the Old Testament, with reason, which evidences great acuteness and clear understanding. It was translated from the Arabic into Hebrew, by some Jews, and by Buxtorf, into the Latin, (1629). His other works were a Commentary on the Mischna, in Hebrew and Latin, (Amsterdam, 6 vol. folio.) Jad Chazukha, (Strong Hand) an abridgment of the Talmud, (Venice, 4 vol. folio.) Sepher Hammisoth, Book of Precepts, Hebrew and Latin, (Amsterdam, 1640,) an exposition of 613 affirmative and negative precepts of the law. Also, a book on Idolatry, translated by Vossius, one on Christ, translated by Genebrard, &c.—Vide, Encyc. Americana Transl.

<sup>‡</sup> See our Lit. and hist. Analekten, §. v.

We have many of his works on medicine, among others a Medical Topography of the city of Alexandria, and a treatise entitled Directions of things which are useful for the mind and body. He also cultivated Arabic literature, and prided himself on speaking that language with great purity, and had always before his eyes the Sihah of Djenhari. Ebn Abi-Osaïba, in his history of physicians, relates an adventure of his, which gained him great reputation. He saw one day a funeral; they were bearing the body of a man to the cemetery for interment, stop, cried he, that man is not dead, and in fact the man really was resuscitated and lived a long time afterwards.

We must not confound this Hebat-Allah with Hebat-Allah Ebn-Melka, another Israelite physician of the same period. The latter flourished at Bagdad. He is styled by the Arabs Aouhadel-Zeman, (the unique of his time) and on account of his miraculous cures, Abou'l Berekiat, the father of blessings.\* He was a friend of a Christian physician of the same name as himself, but he was not like him in his firm adherence to the faith of his fathers, for influenced by mercenary motives, he apostatized from his religion and became a Mohammedan.

Hebat-Allah the Christian, could not suffer patiently the desertion of his friend, and he reproached him in the keenest manner in verses reported in the Abou'l faradj, in which he said, among other things, that he imitated his forefathers, who wandered in the desert, and who, in coming out, only deviated more and more widely from their route.† Enb-Melka died blind, deaf and poor, which Zacuth does not hesitate to regard as a judgment from heaven, for having abandoned the faith of his fathers. Let that be as it may, Hebat-Allah has left behind many works which justify in part the encomiums which have been bestowed upon him. We note among them the work which is entitled Almot' eber; this is a compend of Dialectics, which a prince of Seldjuekes made a subject of profound study. There is also in existence a medical work, which bears the name of Acrabadin, that

<sup>\*</sup> Abou'l Faradi, Hist. Dynast. p. 394, Zacuth. Jouchasin, p. 149.

<sup>†</sup> D'HERBELOT. Bibliotheque, Orientale, word Hebat Allot.

is to say, of antidotes and compound medicaments, which is by Hebat-Allah, but we know not whether it is our doctor or his friend, the Christian physician.

## § XXXVII.

#### THE ARABIAN SCHOOL.

Many physicians of the Arabian school are honorably grouped around Hebat-Allah. Abou-Mona Ebn Abou-Naser, surnamed Kouvin, occupies a distinguished rank as a practical physician.

He practised his art at Haran, and wrote a treatise on the art of preparing and preserving simple and compound medicines.\* Rabbi Zadok followed the same career at Damascus,† with perhaps not less distinction.

Ebn Zacarigga, raised himself above them all, by the depth of his observations, and the extent of his knowledge. As a great politician, he became the counsellor and the physician of the son of Noureddin,† who died at Aleppo in 1181. He was associated with Joseph surnamed Borhan al-Fulk, a living proof of the celestial spheres, on account of his great knowledge in astronomy.

Abou'l bérécat, son of Said, deserves also to be noted among the physicians of the Arabian school, and of that epoch. He was a Samaritan, and practised medicine at Basra, a village about four day's journey from Damascus. He was the person who diffused among his countrymen, the Arabic version of Abou-Said, to which he added a preface, in which he sought to derive credit to himself among those of his own religion, as being the author of this version. Abou'l manet ben-Abou Nasser, better known by the name of Cohen-Ather, belongs also to this class of physicians. He followed the profession of an apothecary with much celebrity at Cairo, where he died about the 1135th year of the common era. He left a work in Arabic, Menhag al-Dokian, prac-

<sup>\*</sup> Biographic Medicale, tom. I. page 7. † Benjamin de Tudela, Massahot p. 63.

<sup>‡</sup> KEMAL EDDIN, an Arabic MSS, in the Royal Library of Paris.

<sup>§</sup> See our life of Saadia Gaon, p. 23.

tice of pharmacy, in which he directs the manner of preparing potions, boluses, confections, syrups, &c.\*

Cohen Athar had an associate Jewish physician, who was in the service of Hafedh-Leddinellah, the eighth caliph of the Fathemites in Egypt. This prince required his services to destroy his Vizier, the cruel Hassan, by poison.†

Ibn-Saigh is also one of the physicians of that school, whose works are the most celebrated. He was born at Saint Mary's, in Andalusia. His parents who were very enlightened, and neglected nothing to complete his education, urged him forward in the sciences, and he distinguished himself, more particularly, in the study of philosophy and medicine. He practised also this last science with good reputation in the place of his birth, where he died in the 550th year of the Hegira, or the 1155th of the common era.

Lastly, among the later physicians of the 12th century, it is proper to mention, Joseph ben-Alfakhar, chief of the Jewish community of Toledo, where he was born about the middle of the twelfth century. Having become a doctor of medicine, he practised this art with deserved success. He was also very learned in the traditional laws of the Rabbis, and was esteemed a very good casuist by the doctors of his time.

## § XXXVIII.

### SANIAT-ALMELIC, IBRAHIM BEN-MOUSSA.

The year 1200 was ushered in, to use the words of a contemporary, as a monster, whose fury threatened to destroy all the resources of life. A terrible earthquake desolated Syria, Mesopotamia and Asia Minor; and the Nile did not afford its usual fertilising tribute. This produced a severe famine, which de-

<sup>\*</sup> MSS. of our Cabinet, No. 23.

<sup>†</sup> D'Herbelot, Biblioth. Orient, the word HAFEDH, LEDDINELLAH. ‡ Ibid. Same article. § Igheret ha-Rambam, p. 26.

Vol. II.-No. 3.

stroyed a great number of persons, particularly in Egypt, where the famine compelled them to eat human flesh. Ebn-Allatif\* relates a very extraordinary adventure of a Jewish physician of Fostan, which happened during the famine, and which we shall introduce in this place.

A physician, distinguished for his knowledge, and who was connected with our Arabic historian, was sent for by one of his patrons, a man of respectability, to see a sick person. The doctor had no sooner entered the house to which he had been conducted, than this man closed the door, leaped upon him, and cast a cord around his neck; then the sick man himself powerfully grasped his testicles, but as neither of them knew any other mode by which death could be brought about, the struggle was prolonged, and the physician uttered cries which were heard by many persons, who, upon entering, rescued him from the hands of the assassin. The old man, half dead, and having but a breath of life, his testicles being bruised, and his front teeth knocked out, was carried home in an insensible condition, and the assassin was taken before the provost. This officer demanded of him what could have induced him to commit this crime; he replied, that it was hunger. The provost then ordered him to receive the bastinado and be banished.

We do not know the name of the physician who was so near becoming the victim of his devotion; perhaps it was the famous Saniat-Almelic Abou l'haher Ismail,† son of the celebrated Ebn-Djame, who practised then at Tortan, where he enjoyed a splendid reputation. Among the medical works which we owe to Saniat-Almelic, it is proper to mention the treatise which bears the title Directions for things useful for both mind and body, that his father had left imperfect, and which he revised and published in 1201, of the common era.

There yet remains to be noticed some small treatises of *Ibrahim* or *Abraham*, son of Maimonides, a physician who was attached to Mélic-Alcamel, brother of Salah-Eddin, and physi-

<sup>\*</sup> Relation del' Egypte, book II. chap. iii, p. 413.

<sup>†</sup> EBN-ABI-OSAIBA, Hist. des Medecins loc. cit.

cian of the hospital at Cairo. Ebn-Abi-Osaiba,\* who gives a very short account of this physician, says—that being himself physician of the hospital at Cairo, about the 631st year of the Hegira, (1238) he had seen him there frequently. Ibrahim Ebn-Maimoun died about the 634th year of the Hegira, or the 1236th year of the Christian era, aged about fifty-one years. He was the wisest Rabbi, the most pious doctor, and the most distinguished Savant of his time. Devotedly attached to every thing which had been written by his illustrious father, he defended his works against the attacks of a great number of Rabbis, both of the east and the west; particularly against those of France, who condemned many of them to the flames.

### § XXXIX.

#### MOUHEDDHIB-EDDIN.

A very distinguished physician of that period lived at Damascus. Ebn Abi-Osaiba,† speaks at great length of his profound knowledge, and the astonishing cures which he had performed.

This celebrated physician was Mouheddhib-Eddin Joseph, son of Abou-Said, son of Khalef Samari, or the Samaritan. He enjoyed the highest favor of many princes, when he was elevated to the dignity of Vizier by Almélic-Alamdjad. Mouheddhib-Eddin possessed the entire confidence of this prince, who gave up to him the whole care of his affairs. But the Vizier did not use with sufficient prudence, the favor which he enjoyed. Many of the Samaritans of Damascus having repaired to him at Balbec, he employed them in all parts of his government, and trusting in the influence of their patron, they gave a loose rein to their cupidity, and caused numerous complaints. On the other hand some Musselmen priests, offended at the great confidence that a prince of the Believers granted to a Samaritan, publicly preached against him.

Almélic-Alamdjad, wearied with their complaints and reproaches, arrested this Vizier and all those of his sect, that he had admitted

into his employment, and confiscated their property, Mouheddhib-Eddin, after having been a long time in prison, finally recovered his liberty, and returned to live at Damascus, where Ebn-Abi-Osaiba made his acquaintance. He received from his own mouth the narrative of his life, that he has given us, and concludes by quoting some verses of which Mouheddhib-Eddin is the author. After which he adds, that our Samaritan doctor has composed many works; among others, an Arabic commentary upon the five books of Moses.

He died at Damascus in the month Sefar, of the 624th year of the Hegira, the 1227th of the common era.

Damascus possessed, also, at that time, two medical Rabbis, the only two quoted in the celebrated divan of Charizi.\* But while he styles the first Moseh ben Zedaka, the crown of physicians, he ridicules the second Baruch, the physician. He accuses him of ignorance, and possessing more benevolence than knowledge, in the practice of this art. However that may be, both of them were unable to sustain the rivalry of the Samaritan physicians, Sadaka ben Mikha, and Emin-Eddaula, of whom we shall speak in the following paragraph.

## § XL.

#### SAMARITANS.

We have just spoken of Mouheddhib-Eddin Joseph, a Samaritan physician, and of the favor which he enjoyed with many princes, of his elevation to the vizierate, and that too on account of his profession.

There were also at that time other Samaritan physicians, viz: Sadeka son of Mikha, whom Ebn Abi-Osaiba ranks among the most illustrious physicians, and Emin-Eddaula, who has left many works relating to natural history and astronomy.

The first died at Harran, about the 620th year of the Hegira, (1223) and is the author of an Arabic commentary on the Pentateuch, of some other theological works, and of a commentary

<sup>\*</sup> Sefer Tahkemoni, chap. xlvi. of the edition, or chap. xxxix. of the MSS.

on the aphorisms of Hippocrates, and a treatise on simple medicines. As regards Emin-Eddaula, he was born at Damascus, at the end of the 12th century. His father Gazzal, son of Abou-Said, was a brother of Mouheddhib-Eddin, and chief of a Samaritan community. He conducted the education of his son with all the zeal of an affectionate father, and the sagacity of an enlightened man. The young Emin-Eddaula, whose faculties developed at an early period, and so well responded to his paternal cultivation, that when scarcely eighteen he was qualified to be introduced to the public as a practitioner of medicine. Soon after he entered the service of the Sultan Almélic Alamdjad in the capacity of a physician. Having renounced his religion, he received, on embracing Mohammedanism, the honorable title of Kémal-Eddin.

After the death of this prince, which happened at Damascus in the month Schowal, 628th of the Hegira, he became Vizier to his successor Almélic-Alsaléh Omad-Eddin, son of Abou'lfeda Ismaïl. Emin-Eddaula discharged this high office with honor; but Almélic-Alsaléh Nedjim-Eddin, having become master of Damascus, and giving Balbec to Almélic-Alsaléh-Omad-Eddin, in the year 643 our Vizier was seized and put in prison by the new governor of Damascus, at the very moment when he had departed from that city to transfer himself, with all his property, to Balbec.

This calamity was brought upon him, on account of the immense wealth which he had amassed during the time when he was Vizier. He was sent to Cairo and imprisoned in the citadel, where he was strangled, in the 646th year of the Hegira, which corresponds to the 1246th year of the common era.

## § XLI.

#### JOSEPH-AL-SEBTI.

Before the time of the Samaritan physicians, the Rabbis of Aleppo practised the healing art, with no less talent than success. Let us notice first, Joseph-al-Sebti, (or rather as his full name declares, Joseph ben-Jahia ben-Ishak al-Mogrébi al-Sebti,)

saw the light at Sebta or Ceuta, an African town upon the coast of Barbary.\* While yet young, he was compelled to fly his country on account of the harsh measures which were then used towards the Jews and Christians, to compel them to embrace Mohammedanism. He came to Egypt, and passed from it to Aleppo, where he was physician to the Sultan Al Dhaher, and where he died, the 623d year of the Hegira, or the 1226th of the Christian era.

This is the very great philosopher and remarkable physician, that the celebrated Charizi eulogises in his divan,† under the name of Joseph ha-Maarabi, the African, so called, from his birth-place. He was also an able doctor of the law; but we should not confound him with another Rabbi of the same name, who was his countryman, and who was exiled from Africa to Egypt, which latter country he also left to seek retirement at Aleppo. This last is named Rabbi Joseph ben-Jehuda ben-Simeon ben-Aknin, and is celebrated by Charizi‡ as the only distinguished poet that Africa has produced.

Let that be as it may, we note a very singular anecdote, that Abou'lferadj § relates of our Joseph al-Sebti. Having promised a Cadi, named Akram, who was one of his most intimate friends, that he would return and visit him after his death, and having obtained from his friend, a reciprocal promise on his part, two years elapsed after his decease, without his keeping his promise, but at the end of that time, he appeared to the Cadi by night in a dream, and was reproached by the Cadi for not having kept his word, upon which the departed physician took him by the hand and pressed it, saying, "that which was universal is reunited to universal, and that which was particular remains with things of a similar nature."

Our doctor had as an associate a Rabbi Elazar, a royal physician, who should not however, be confounded with another physician of Aleppo, of the same name, and with whom Joseph al-Sebti sustained a scientific controversy. The second Rabbi

<sup>\*</sup> D'HERBELOT, Eibliot. Orientale, word SEETI.

† Sefer Tachkemoni, l. c. 

‡ Ibid, chap. xviii. 

§ Hist. Dynast. p. 302.

|| Tahkemout, chap. xlvi. p. 65.

Elazarnous is described by Charizi,\* as a man who had little respect for his religion, and rarely kept the Jewish feasts and solemnities. One day he was sent for to attend the king of Hamat, and went immediately, although it was the Sabbath day.†

Many other physicians were then celebrated among the Rabbis of Aleppo, whom we consider as the colleagues of the preceding. Such were *Hanania ben Bezaleel*, who is praised by Charizi as having a profound mind, and as a great patron of learned men.‡ Rabbi Jehuda, remarkable for the excellence of his private character and the greatness of his benevolence, and the learned and honorable *Rabbi Finchas*, known as the chief of his nation.

## § XLII.

#### SAAD-ED-DAULAH.

We have rapidly sketched the history of the rabbinist physicians of Damascus and Aleppo, to the thirteenth century, from Charizi who knew them personally. Let us introduce here, what the same writer has said, of two other physicians of this sect. The first Rabbi David, practised his art at Hamah, where he enjoyed a good reputation; the second Rabbi Mazliach, cultivated very successfully the sciences, by which he triumphantly combatted all his opponents.

But besides these physicians, there were at that time in the east, many others, principally in Syria, where flourished Rabbi Ahron.†† He is the father of the celebrated Abou l'faradj, who was surnamed in Syriac, after having deserted the standard of the synagogue, Bar Ibra, the son of a Hebrew, which is expressed in Latin by Bar Hæbræus.

Next to these masters of the Hippocratic art, ranks Saad-ed-Daulah, a famous physician to the court of Argoun-Khan. † Skil-

<sup>\*</sup> Ibid, p. 65, a.

<sup>†</sup> Ibid. We should infer from this that it was not considered lawful to heal on the Sabbath day.

<sup>‡</sup> Tachkemoni, xlvi. p. 65, b. § Ibid. || Ibid, p. 66, a. ¶ Ibid, p. 65-\*\* Ibid, p. 66. †† Abou 'lfaradi, l. c.

<sup>‡‡</sup> D'HERBELOT, Biblioth. Orientale, word Arghoun Khan.

ful, and very agreeable in conversation, he soon ingratiated himself into the good graces of the Sultan, who appointed him his prime minister. We should render him this justice, that he did not diminish any of the privileges which the Christians possessed, in the government of Arghoun; but he used all his influence to advance those of his own sect, and to favor them as well as the Christians who were then very powerful at the court of the Sultan.

It thus happened, that the Musselmen who had no influence with Arghoun, murmured continually against both Jews and Christians, but particularly the latter. "Arghoun," said they, "has promised to change the temple at Mecca into a church, and instead of worshipping the all powerful God, to introduce the worship of statues and images."

In reply to these complaints, the Sultan prohibited them from coming into his camp, or appearing at court, probably for fear they should revenge themselves on him. But they were soon consoled by the illness of Arghoun. Saad-ed-Daulah, who foresaw the results that this disease would bring about in reference to himself, and those he protected, sent every where express orders, to repair the excesses which had been committed during his ministry, and to conciliate the Musselmen, by giving them prompt satisfaction, but it was all in vain. Arghoun-Khan died the 690th year, (1291) of the Hegira, and even before his death, an accusation was made against the minister of state, of having poisoned his master.

This accusation, as incredible as it could appear to be, did not fail to gain credence among the people, who fell upon Saad-ed-Daulah and massacreed him.

After his death, the Musselmen who had regarded with an envious eye, the great credit of the Jews and Christians, embraced this opportunity to take vengeance on them, and made a great massacre of the people of those two nations.

### § XLIII.

### EBN-ZOHAR, ALFAKHAR.

After having traced the art of healing among the Israelites of the east, down to the end of the thirteenth century, we shall proceed to retrace our steps and take a rapid glance at the medicine of the Hebrews in Europe, during this remarkable period.

The first in chronological order, that is presented for review, is Ebn-Zohar. A son and pupil of Abon-Merwan Ebn-Zohar, he is worthy to be compared with that great man. He lived like him at the court of Joseph ben Tachefyn of Morocco, and also was in high favor with that prince. Leo Africanus has preserved an anecdote of this sovereign, which proves his generosity, his spirit, and his kind feelings for Ebn-Zohar. Departing for Africa, he took with him Ebn-Zohar, who was as great a poet as physician. Having entered one day unexpectedly into his cabinet, and not finding him there, Joseph, casting his eyes upon the papers lying on the table, saw some verses, in which the doctor expressed his regret at being separated from his family, which remained in Spain.

In a very short time the prince, without saying a word to Ebn-Zohar on the subject, sent an order to the governor of Séville, to cause the family of the physician to come with all possible dispatch to Morocco, where they were lodged in a great palace, richly furnished, and which was made a present to them. Ebn-Zohar being sent to this palace, under the pretence of seeing some sick persons, was very agreeably surprised thus to find himself in the midst of his family, which he believed were at so great a distance from him.

After a life of great labor, and valuable to his science, he died in 1216, aged 74 years.

His works are held in high repute among the Arabs, but none of them up to the present time have been published. We find a list of them, in Ebn-Abi-Osaiba's history of physicians.

The next in order, after Ebn-Zohar, is Jehuda-ben-Joseph ben-Alfakhar, a Rabbi and physician, chief of a Jewish community, and celebrated in the controversies about the writings of Maimonides. He was the only Spanish doctor who did not unite in the condemnation of the opponents of those books. On the contrary, he approved of the conduct of these opponents, under the impression that it tended to preserve the purity and simplicity of the law of Moses. David Kimchi, who was sent into Spain, by the synagogue of Narbonne and of Beziers, to hold a conference upon this subject, with the chief of the synagogue of Toledo, addressed him a letter\* in which he expressed the reasons, which he believed most suitable, to bring him round to the opinion of his countrymen. He received a reply, full of arrogance and invective.† Kimchi did not despond, although he clearly perceived, that it would be difficult to overcome the obstinacy of a man, that religious zeal strengthens in his opinions. He wrote many letters; to him, to which the Toledo physician replied with the same ill temper. Nevertheless, the sincerity and the moderation that Kimchi evidenced in this epistolary contest, by degrees soothed the effervescence of the bile of Alfakhar, but without his acquiescing in the decision of the other Spanish Rabbis.

## § XLIV.

#### NACHMANIDE.

A physician who deserved and obtained the name of prince of the Cabala, was the famous Moses ben-Nachman or Nachmanide, born at Gironne, about the year 1196, of an ancient and learned family of Catalonia. While yet young, he was sent to France where he made a remarkable progress in the celebrated schools of Nathan ben Meir, \*\* at Trinquatille, and of Jehuda†† at

<sup>\*</sup>Inserted in Igheret ha-Rambam, p. 13. † Ibid, page 13. † Ibid, pages, 15, 16, 18. § Zacuth, Sefer louchasin, p. 132.

¶ Duran, Questions et Responses, tom. 1, No. 72.

\*\* Azulai, Schem ha Ghedolim, tom. 1, No. 27.

†† Schem ha Ghedolim, b c. Vaud la Chachamim, tom. 1, § 8.

Montpelier. This last doctor, who was a professor of the faculty of medicine, taught him the art of healing, particularly that part which relates to midwifery.

While yet a pupil, Nachmanide already felt the desire of being an author. The explanation of the Talmud, afforded a fit subject for his flowing and eloquent pen. Returning to his own country imbued with the inspiration of the doctrines of the Talmud, and zealous to propagate them, he founded a rabbinical school.

Possessed with the Talmudical science, it is said, he despised the Cabala, into which, it is said, he was initiated by a certain Rabbi Asriel of Gironde.\* But having been converted, he studied it with such ardor, that he was honored with the glorious title we have already mentioned.

Nachmanide was successful in many things. He was a commentator, poet, orator and philosopher, but this last title is denied him by a cotemporary.† If we could credit one of his disciples,‡ he cured disease of the kidneys with pieces of lead, representing the figure of a lion; this he asserts will not give us a very high opinion of his medical knowledge. Nevertheless, he appears to have been a good accoucheur.§ Be that as it may, the reputation of our physician as a learned doctor of the law, was very great in his own country, as is proved by the fact, that he was chosen in 1263 to dispute publicly at Barcelona with P. Paul Christiani, in the presence of king Jacques the I, and Raymond of Penafort.

Nachmanide published the acts of this conference, and concluded them by obtaining the assurance that the king was so well satisfied with his conduct, that he gave him three hundred écus. These transactions caused so much excitement, that the author was compelled to leave his country, at the age of sixty-seven

<sup>\*</sup> Ibid, tom. II. L. Mem. § xxxiv. † See section, after § liii.

<sup>‡</sup> SALOMON BEN ADERETH.—Questions et responses, No. 183, and 413.

<sup>§</sup> Ibid, No. 120, KARO, Bedak ha-Béil loré deah, No. 154.

<sup>||</sup> See Milchamat Chobah, Constantinople edit. 1710, p. 1; FR DIAGO, Histor. provinc. Aragon, lib. I. cop. ii.

The écus is equivalent in value to about a crown.

years. He took refuge at Jerusalem, where he arrived the 9th day of the month, Elue 5027th year of the creation of the world, (Sept. 1267,) where he raised a synagogue. We have at the present time three letters of his, which he wrote at that time from Palestine; the first, addressed to his son Nachman, contains the announcement of his arrival at Jerusalem, and the condition of the holy city.\* The second, addressed to his son Salomon, who was in personal attendance on the king of Castile, contains directions as to the manner in which he should conduct himself at court; the third is a kind of moral treatise for the use of his son Nachman.† The last letter is dated from St. Jeun d'Acre, to which place he retired, and where he died at an advanced age, leaving a great number of works, which were much esteemed.

### § XLV.

### MOSCA, MESCHULAM BEN IONA.

Alphonso the wise king of Castile and Leon, succeeded his father Ferdinand in 1252. His reign was not fortunate, but he was distinguished for his knowledge. The Alphonsine tables were calculated under his direction and at his expense. He employed in these scientific works the learned Israelites of his kingdom, among whom, is included his first physician, Jehuda Mosca.

Profoundly instructed in astronomy, and in many languages, he translated for his master, even before he was king, a very ancient anonymous work, treating of three hundred and sixty kinds of stones distributed in twelve classes, agreeably to the signs of the Zodiac, their virtues and their relations with the stars. This translation which he made from the Arabic into the Castilian, is found in the library of the Escurial; Rodriguez de Castro has furnished us with an extract from it.† Mosca translated from the Arabic into Castilian, for Alphonso X, another work on Astrology, composed by Ali Ibn Raghel.§ The translation of Mosca is lost, but the Escurial possesses two Latin versions made from her own, of which, Rodriguez de Castro gives us a complete analysis.

<sup>\*</sup> Published at the end of his book Schaar ha Ghemul, Ferara, 1557.

† Ibidem. 

‡ See the Biblioth. Espan. tom. 1, p. 103. 

§ Ibid.

Meschulam ben Iona, also acquired much of renown, in the study of medicine. He translated from the Arabic into Hebrew an universal treatise on medicine, by the celebrated Khalaf Ebn Abbas Abou'l kasem, surnamed Al-Zaharabi, who was born at Zehara near Cordova, and died in this last city, in 1122.\* This version which is found in MSS. in the Royal Library of Paris,† under the title of Sefer Chefez ha-Schalom, which means the book of perfect desire, is divided into two parts. The first treats of the theory, and the second of the practice of medicine, and each of these two parts is subdivided into many chapters.

Bartholocci in his Rabbinical Library, makes no mention either of this work, or its translation. The author of Schifte Iéschenim<sup>†</sup>, says, that he has seen a copy of it in the Imperial Library of Vienna, which had been written in the 5170th year of the creation, and the 1410th of the Christian era. With regard to the Parisian MSS, the first appears to be likewise of the fifteenth century. We find at the end of the second, at the beginning of the last page, these words: "This work was accomplished by the hand of Isaac, son of the learned Rabbi Salomon Dalbadi; I have finished it,"in the city of Melfi, the 15th of the month of the first adar, (February) of the 214th year of the small number," that is to say, the 5214th year of the creation, the 1454th year of the common era.

## § XLVI.

#### SPANISH SCHOOL.

Medicine was, in the thirteenth century, in such great favor among the Israelites of Spain, and the Hebrew physicians were so numerous, that the celebrated poet Charizi composed a medical poem under the title of Refuot-Ghevyah, physic for the body, printed at Vienna, Ferara and Amsterdam.

In fact, the epoch which we are now exploring was so prolific in Spanish physicians, that to those we have already named, we might add *Bechai ben Moscheh*, the first Rabbi of Sarragossa.

<sup>\*</sup> See Castri, tom. p. 186. † MSS. hébr. anc. fonds, Nos. 383 and 388. ‡ L. Chet, p. 25, No. 63.

A distinguished philosopher and a decided partisan of Maimonides, wrote to the synagogues of Arag a monitory letter, to engage them to adhere to the anathema cast by the Rabbis of Castile against the Rabbis of Montpelier, the adversaries of this great man.\*

Salomon ben David, physician of Ferdinand III, king of Castile, deserves to be ranked alongside of Bechai. David Kimchi who he attended when sick, at the time he was passing through the kingdom, in the 1232d year of the common era,† styles him the learned doctor.‡

Let us speak also of a third; viz. the learned Rabbi and physician, Moseh ben-Al Constantini, a name which he derived from a small town of Spain in Andalusia, of which he was probably a native. It was Moseh son of Solomon, ben Al-Constantini, quoted among the doctors, who subscribed a declaration in favor of the works of Maimonides, which the Rabbis of Montpelier had condemned to the flames. His son and grandson, after him, became very celebrated for their science and learning.

It was also at that period, that there flourished in Egypt, the physician Abou'l meni Ibn-Abi Naghid, author of a medical treatise, entitled Mekhol-Abckat-Rochal, the manuscript of which exists in the Escurial; I Jacob the physician, who practised at Toledo, the doctor Joseph Constantini, who Charizi praises as a learned and honest man, \*\* and who practised his profession at Calatayud; Jehuda ben-Isaac, a physician and poet of Barcelona whom Charizi styles the fountain of eloquence. † It yet remains to mention, the doctor Salomon ben Moseh, brother of Bechai ben Moseh, of whom we have spoken in a previous part of this work; Ibrahim ben-Sahal, born at Seville, who was a poet,

<sup>\*</sup> Ibid. † Igheret ha-Rambam, pages 35 and 36.

<sup>‡</sup> David Kimchi, during the period of the controversy concerning the opinions of Maimonides, between the Spanish and French Rabbis, was sent as arbiter to decide between them, to Spain, when this incident occurred, 1232, A. D.—Penny Cyclopædia, vol. 13.

<sup>§</sup> Ibid, page 36. || CASIRI, Biblioth. tom. ii.

<sup>¶</sup> SEFER TAHKEMONI, chap. xlvi. p. 63.

philosopher, astronomer and physician. He cultivated the different sciences and arts, with equal success. But the verses he composed, were of an amatory character, which drew upon him the dislike of those of his own sect. After having suffered many persecutions at their hands, he died in 1265, poisoned, it is said, by them.\*

Finally, we note Nathaniel ben Joseph Almoli, who translated, in 1298, the fifth part of the Arabic commentary of Maimonides on the Mischnah, that is to say, the treatise of the Holiness.

## § XLVII.

#### FACULTY OF MONTPELIER.

At this epoch, central France was not less prolific in Jewish physicians. The clergy were so enraged at this, that they revived against them, the ancient laws of the church. Thus in 1246 the council of Beziers prohibited Christians from being attended by Israelite physicians,† and the council of Alby held 1254, also prohibited the employment of Hebrew physicians.‡

All of these physicians came from the school of Montpelier, of which many of the Rabbis were agreges. We have already spoken of Jehuda, master of Nachmanide. This doctor, a disciple of the celebrated Isaac ben-Abraham, then governed in conjunction with the regent Nicholas, the medical school. Another professor of this school, was the doctor Jacob ha-Katon, a man well skilled in the Hebrew, Arabic, Latin, and provincial languages. He was the translator, from the Latin into the Hebrew, of the pharmacopiæ of Nicholas, a translation of which, is found in the Royal Library of Paris. This same Library likewise possesses, a treatise on Purgation, by our learned physician, which he had translated from the Arabic into Hebrew, for

<sup>\*</sup>Leo Afric. loc. cit. † Labbé, Concil. tom. II. page 606. ‡ Ibid. page 737. § This word is retained as in the original. # Ancien fonds, Nos. 381 and 399. ¶ Ibid. No. 367.

the celebrated Nachmanide, as he has stated in his preface. The author of this treatise is Ebn Roschd.

Another physician of this school is Samuel Aben-Tybbon. He has been justly styled Rosch ha Maatikim, the prince of interpreters, for he was the best interpreter from the Arabic into the Hebrew language.

He was born at Lunel, and at the solicitation of the learned men of that city, he translated the works of Maimonides, such as the Myre Nobochim, the commentary on the Perke Abot, and in the second chapter of the treatise of the Sanhedrim, the letter upon the resurrection of the dead, printed at Venice, in quarto, in the year 1601. The epistle to Joseph ben-Aknin, a MSS. in our cabinet, and also numbers three, four and five of the medical works of Maimonides, as we have stated in a previous part of this work.

Samuel Aben-Tybbon, did not devote all his leisure to the translation of Arabic works, as his father Jehuda Aben Tybbon had done. He also composed many original works, which were held in great esteem; among others, a philosophical treatise, entitled Jikavou ha-Maïm, printed for the first time at Presburg, and in 8vo. in 1837, in which he endeavors, among other things, to demonstrate the causes, which prevent the waters of the sea from encroaching on the land.

Among the great number of works, of every description, that he translated from the Arabic into Hebrew, we note the commentary of Ali ben Razman upon the medical treatise of Galen, entitled Sefer Melachah-Katana, different copies of which are found in MSS. in the Royal Library of Paris.\* From the inscription of the first, we learn that he completed it at Beziers, the 10th of the month Elul, the year 4959 of the creation, which corresponds to September 1199 of the common era.

This version was followed by a translation of the treatise of the understanding of Intellectual Subjects, by Abou Naser Al Farabi, which is likewise preserved in the Royal Library of Paris.†

Samuel finished his days at Lunel, where he died the 4991st year of the creation,\* corresponding to the 1239th year of the common era.

### § XLVIII.

#### SCHEM-TOB.

Marseilles on her part, had also at that period many Israelite physicians, at the head of whom should be ranged Schem-Tob ben Isaac, originally of Catalonia, in which province he was born, at the town of Tortosa, in the year 1196. He was destined by his parents for maritime commerce, to which he devoted himself with great ardor, until an affair of honor† changed his profession all at once.

Happening to be at St. Jean d'Acre, in the year 1226, he went to consult a famous doctor of the law, residing in that city, upon a case of conscience, of which he desired a speedy explanation. The doctor being much engaged at that moment in solving a geometrical problem, repulsed him rudely, and reproached him for his total ignorance of the faith of his fathers. Schem-Tob was indignant at this treatment, and retired full of rage; but upon cool reflection, finding that the reproaches of the doctor were too well founded, he was ashamed of himself, and took a solemn oath, that he would not engage in any commercial business, until he had first studied the religion of his ancestors. He returned immediately to his own country, and became a pupil of the Rabbi Isaac ben Meschulam of Barcelona.

Schem-Tob, although already more than thirty years of age, commenced the elements of the law, and undertook the study of medicine with incredible zeal. He thus made prodigious advances, and astonished the profession by his brilliant performances. Having received the doctorate of medicine, he came to France, stopped at Montpelier, and ultimately established himself at Marseilles, where he rendered himself celebrated for the practice of

<sup>\*</sup> MSS. of our collection, No. 83.

<sup>†</sup> An affair of honor at the present day, has a much more belligerent meaning than our author gives to it.

his art, as well as by the numerous works which he then composed and translated.

The following is a notice of his principal works:

1. Sefer ha-Schimusch, the book of service, or practice; a medical treatise, composed by the celebrated Al-Zaharabi, in Arabic, and translated from this language into Hebrew, by Schem-Tob, in the 5014th year of the creation, the 1254th of the common era. This translation, which is found in MSS. in the Royal Library of Paris,\* has in a long preface, a kind of introduction to medicine, in which he gives advice to physicians, in reference to the proper manner of conducting themselves both in their attendance on the sick, and in the composition of medicines. According to the belief of the times, he professes to prove, among other things, that the stars exert an influence over our bodies, and over medicines. He speaks also of his education and of his studies, and it is from that source that we have extracted the details of the history of his life, which we have just related. Unfortunately, the copy that we have under our inspection is imperfect. We find in it only a part of the work of Al-Zaharabi, and that part very much abridged. But there is in the same library another copy,† which contains the twenty-first book, and all of this great work.

We shall give a summary of the contents of these books:

XXI. Of a disease of the throat and windpipe, the remedies which are proper for them, as well simple as compound, gargles, pills and ointments.

XXII. Remedies proper for the diseases of the breast, and of the lungs; of asthma, of shortness of breath, &c.

XXIII. Of ointments, and liquid liniments, adapted to all diseases, from those of the head, to those of the feet.

XXIV. Of other plasters and compounds.

XXV. Of oils extracted from simple drugs, their properties and qualities, the manner of extracting them, and their use.

XXVI. And last, a book of the articles of food, suitable to each disease in general and particular.

- 2. A Treatise on Medicine, by Almansor, translated from the Arabic into Hebrew. This translation, completed in 1264, is found in MSS in the Library of the Vatican.\* It is divided into ten parts, and we may form an opinion of their extent, by the title of the ninth:—Of all the diseases which may exist, from the sole of the foot to the crown of the head.
- 3. Sefer he Nefesch, a treatise of the spirit of Aristotle, a MSS. found in the Royal Library of Paris.†

<sup>\*</sup> Bartholocci, Biblioth. rabbin, tom 1, p. 220. † Ancien fonds, No. 313.

# BIBLIOGRAPHICAL NOTICES.

#### THE NEW YORK LANCET.

### EDITED BY JAMES ALEXANDER HOUSTON, M.D.

Nos. 1, 2, 3, 4 and 5, of this spirited weekly have been received. The following extracts from the prospectus will enable our readers to judge of the character of the work.

"The want of a weekly journal, devoted to the advancement of Medical and Surgical science, irrespective of local, individual, or party interests, and established on a broad and parmanent basis, has been long felt by the profession in this country. To supply this desideratum is the object of the present undertaking. The New York Lancet will be conducted on principles somewhat similar to those which have been so successfully adopted in the management of several European publications, of a kindred character and acknowledged utility. It will be entirely independent of any particular set of men, and will uniformly endeavor to advance, by every legitimate means within its reach, the great interests of the eminently useful and elevated profession, in whose service it will be engaged."

"The contents of each number of the periodical will be comprised under the following heads:—

- "I. Brief and piquant Reviews of new Medical Books, Periodicals, Lectures, and current Medical Literature in general.
  - "II. ORIGINAL CONTRIBUTIONS from distinguished members of the profession.
- "III. MEDICAL AND SURGICAL REPORTS, including notices of the cases at the Clinique of the New York University Medical School, at the Hospitals, and in private practice.
  - "IV. EDITORIAL DEPARTMENT.
  - "V. FOREIGN AND DOMESTIC PROFESSIONAL INTELLIGENCE."
- "The Lancer will consist of sixteen pages, 8vo., double columns; it will be published every Saturday, and forwarded to all parts of the Union with the strictest punctuality and despatch.
  - "TERMS—Three dollars per annum, paid in advance.
- "Books, pamphlets, plates, &c. for review, and all communications relative to the editorial department, to be addressed to the editor at the office of the Lancet.

"Subscriptions and advertisements to be forwarded to the publisher, James Gordon Bennet, at the office of the Lancet, 21 Ann street, New York."

We wish the worthy editor entire success in his effort to "advance Medical and Surgical Science," hoping at the same time, that he may be able to accomplish his object, without being again subject to vexatious and harassing "injunctions."

#### THE WESTERN AND SOUTHERN MEDICAL RECORDER.

EDITED BY JAMES CONQUEST CROSS, M.D. PROF. OF INSTITUTES OF MED.

AND MEDICAL JURISPRUDENCE, IN TRANSYLVANIA UNIVERSITY, &c. &c.

No. 3 of Vol. I, is the only number of this respectable monthly which has as yet reached us. Judging from the contents of this number we are inclined to the conviction, that the Recorder will prove itself a worthy colabourer with those already engaged in the advancement of medical knowledge of the right stamp.

"The editor proposes to conduct a Medical Journal that shall have for its leading, if not exclusive object, to render the profession less speculative and more practical—to expose the fallacy of systematic and show the superior importance of practical medicine—to teach physicians how to treat disease, and not to waste their time and jeopardize health by weaving fanciful and untenable theories. Pathology and Therapeutics will be the topics discussed in the pages of the Western and Southern Medical Recorder, and as these are the branches of medicine which the editor has been engaged in teaching in two medical schools, for several years, he trusts he will be able to render it instructive, not only with selected, but original matter."

"Although the undertaking is one of heavy responsibility, the editor assures the public, but more particularly those of his personal friends to whom he has had the happiness to stand in the relation of teacher, and to whom he mainly looks for co-operation and support, that such arrangements have, at last, been made, as not only to authorize its commencement, but to guarantee its continuance."

"Terms.—As has been stated, the first number will appear the first Monday of next November, and will be continued afterwards regularly the first Monday of every month. It will be published in octavo form, each number to contain forty-eight pages, at four dollars per annum, payable uniformly in advance. It will be printed on fine paper, with new and beautiful type. All letters to be directed to the editor, and the postage must be invariably paid."

#### "A REPORT

"Of the Facts and Circumstances relating to a Case of Compound Fracture, and Prosecution for Mal-Practice, in which William Smith was Plaintiff and Drs. Goodyear and Hyde were Defendants, at Cortland village, Cortland co. N. Y., March 1841. Comprising statements of the Case by several medical gentlemen, together with Notes and Comments on the Testimony. By A. B. Shipman, M. D."

This pamphlet, containing thirty-five closely printed pages, has been before us for some time past. Its title-page, which precedes this article, will give our readers a clear understanding of its contents. The object of its publication by the author will more fully appear by the following

"PREFACE.—An exposition of the facts relative to the late trial between William Smith and Doctors Goodyear and Hyde is, I think, at this time imperiously demanded. It is a duty from which I would gladly be discharged did not justice to myself, to the profession, to the public, and to the sacred cause of truth, loudly call for its performance. The case has been extensively misrepresented. Rumors have been circulating in every direction touching my professional character, together with the other medical gentlemen who were associated with me in the treatment of the plaintiff after he came into our charge. It will be borne in mind that after the defendants were discharged from the care of the plaintiff, myself and others were chosen to attend him. We did so, and under our treatment he recovered. Our success and the final result of the affair, has called out upon us a torrent of vituperation from some with whom we had the fortune to differ in opinion. The 'miasma' of falsehood has been permitted to go out in every direction, and as yet no antidote has been offered. Soon after the trial a brief mention of it appeared in one of the political papers of our village: this was soon followed by another article in the same paper purporting to be a history of the trial, and abounding in grandiloquent and bombastic bursts of rhapsody, evidently proceeding from the brain of some conceited attorney. The article contained the most gross misstatements and misrepresentations, assailing my practice, and reflecting upon those who were connected with me. Another journal was solicited to publish the same, but refused it upon the ground that it was unfair and uncalled for. Great pains were taken to circulate it-extracts were carefully selected and crowded into the journals of the neighboring counties. Were the writer of this article and his motives known generally to the public, no protection from his malign influence would be necessary. He probably had a threefold object in view-first, to gratify a little vanity and deliver himself of a speech which he had been at so much trouble to prepare for the occasion-secondly, to laud his friends, and in some measure soothe their wounded feelings; and thirdly, to indulge a personal animosity towards myself under the cowardly protection of an assumed cognomen. All this I suffered to pass unnoticed, and hoped for no further expose of the subject out of charity for the defendants, who I considered had already been sufficiently chastised. But folly and imprudence in circulating false and slanderous reports, render it important that the matter be laid more fully before the public. The subjebt is one of deep interest, not only to the surgeon and profession generally, but the community at large claim the right to

understand what are the true principles and practice which should guide us in the treatment of those injuries which we so frequently encounter.

"Reluctant as I may feel to censure any one publicly, yet if I should in the course of the following pages animadvert upon the doctrines and practice of any member of my profession, a profound regret will accompany the necessity of such a procedure. Paramount to personal feelings and private regret, a sense of duty impels me to come out in vindication of true and correct principles. Delicacy towards the defendants will cause me to omit many details and circumstances connected with the case which, being of a personal nature, ought not to be unnecessarily obtruded upon the public.

"CORTLANDVILLE, October 23, 1841."

It would be highly improper in us, at a distance from the scene, and only acquainted with the circumstances in this (to those immediately concerned) vexatious case, as they appear in the pamphlet before us, to venture any decided opinion upon the merits of the controversy. As editors of a public journal, it becomes us to avoid mingling unnecessarily in the strife of medical polemics. It may not however, be amiss, to give our readers a history of the case, as recorded by Dr. Shipman, in his own language, and thereby enable them to judge for themselves.

#### HISTORY OF WILLIAM SMITH'S CASE.

"On the 4th of July, 1839, William Smith fell from a building, in consequence of the staging giving way, and fractured his leg. I was called upon to visit him and arrived about two hours after the accident-found both bones broken, tibia two inches above the ankle joint; fibula four inches. The end of the tibia protruded through a laceration in the soft parts on the inside of the leg, four inches long, constituting what is called in surgery a compound fracture. None of the important blood vessels or nerves were injured. The fractured end of the tibia which protruded was transverse on the inside, and a small portion of its diameter on its outside or next the fibula, was detached and had fallen out. The extreme end of the bone was denuded of its periosteum, perhaps one quarter of an inch. One small spicula of loose bone was removed from the wound with the fingers. No dirt or foreign bodies were in the wound, nor was there any considerable hæmorrhage. After sponging the wound, extension and counter-extension was made, and the bones placed in apposition. Narrow straps of adhesive plaster, bringing the wound accurately together, were applied—Scultetus' bandage, and two long splints well padded, reaching above the knee and below the ankle, with another short splint along the front of the leg-these were secured by strong tapes, and the leg extended upon a pillow with directions to keep it constantly wet with cold spirits and water. An anodyne of Sulphate of Morphine was administered, and I left him. The patient was about fifty years of age, of a strong and robust constitution, but addicted to intemperance.

"The following day, July 5th, Mr. Edward Allen, superintendent of the poor, called on me to know my opinion as to the propriety of removing Smith to the almshouse, and requested me to visit him, which I did—found that he had rested tolerably well through the night, and was free from pain. As the almshouse was

but a short distance, I advised his removal, and assisted in getting him up stairs into his room; examined the limb to ascertain if the dressings were deranged, placed it in an easy position upon a pillow, directed the nurse how to manage him as to diet, regimen, &c. and considered my services at an end, as I was not the attending physician at the almshouse. I heard no more of the case until the 13th, when Mr. Allen called at my office about noon, and requested me to repair to the almshouse to amputate, or to assist in amputating Smith's leg.

"Mr. Allen stated that he had been there that morning, and that Drs. Goodyear and Hyde had given it as their opinion that the leg must be amoutated that day, and that he had accordingly summoned a number of physicians for that purpose. On arriving at the almshouse, Drs. Goodyear and Hyde were there with some others, and we were soon joined by Drs. Lewis Riggs, G. W. Bradford, and Joel R. Carpenter-Wm. J. Wilson, Benton and Maybury, medical students, were also present. Two of the superintendents, Messrs. Cove and Allen, were there and present at the consultation. After examining the limb, the medical gentlemen retired to a private room for consultation. Instead of proceeding to amputate the limb, as the nature of the summons had prepared us to expect, the question arose as to the propriety of amputating at all. The patient at this time was in the following condition: his leg lay over the double inclined plane; the bone protruding through the wound nearly two inches, it was dry and dark, and had lost its vitality; the foot was turned off and the leg distorted, with retraction of the muscles and shortening of the limb—the leg was swollen and inflamed nearly to the knee; the wound gaped, but there was no loss of substance; upper part of the wound had healed, and healthy granulations covered a portion of the bone—some pus of good quality issued from beneath the bone. The patient suffered much pain, yet was free from fever; appetite, strength and pulse good, tongue clean and bowels regular. Drs. Goodyear and Hyde urged the necessity of immediate amputation. The reasons they assigned were, the age, habits, constitution of the patient, state of the weather, and apprehensions of fever. Dr. Bradford thought it a case in which the propriety of amputation might be "talked of." Drs. Riggs, Carpenter, and myself, saw no reasons why amputation was required: there were neither local or constitutional symptoms which demanded it. I explained to Drs. Goodyear and Hyde the situation and circumstances which ought to guide us in the consideration of amputation, in cases of compound fracture. That there were three periods of time at which this operation may be proper. The first is immediately after the receipt of the injury, before swelling, inflammation, or a disposition to gangrene has taken place; that if the soft parts are extensively contused and lacerated, the principal blood vessels and nerves destroyed, so much so that we have good reason to fear that there is not enough left to carry on the circulation of the blood; the bones broken and comminuted, or important joints involved in the mischief, then it becomes a matter of serious consideration whether the attempt to save the limb will not in all probability be followed by the death of the patient. That the second period is when, after a great length of time the bones refuse to unite; the sore instead of assuming a healthy granulating surface, take on a spongy unhealthy aspect, secreting a large quantity of thin sanious matter; the patient loses his appetite and strength; hectic fever with a weak quick irritable pulse-he becomes pale and emaciated, colliquative sweats and diarrhea

reduces him to the lowest state of existence; then it becomes the duty of the surgeon to perform amputation, as the only means of saving his patient's life. The third period is one which does not require much deliberation: it is when a limb instead of suppurating and granulating kindly, manifests a gangrenous disposition, ending in complete mortification, involving the whole members, skin, muscles, cellular tissue and tendons quite down to the bone, and all circulation is totally cut off below the part injured. A patient in this situation must either lose his limb by the spontaneous efforts of nature, or by the hand of the surgeon.

"It was formerly thought necessary in such cases that the progress of the mortification should be arrested, and a line of separation formed between the dead and living flesh, before such operation could be safely performed, but modern surgery has here made some distinction. There are certain cases of mortification, the direct result of external violence, in which the operation has been successful, though the mortification was in a spreading state. This kind of mortification has received the name of traumatic gangrene, and is often met with in military surgery. I also explained to them that the case under consideration did not fall within either of the above rules of surgery. The first period had passed over, and I had decided that an attempt should be made to save the limb, and had reduced and dressed it accordingly—that the second period would not apply, as there was no hectic fever, diarrhea, or night sweats which demanded a removal of the limb: on the contrary the patient retained his strength and appetite, and appeared in no danger of sinking from the local cause; and that the third rule would not apply at all, as gangrene had not, nor was there any probability that it would take place. I advised the removal of the dead portion of bone with the saw, which offered an obstacle to the reduction of the fracture, placing the bones in apposition, and applying appropriate dressings; that it was important that the fractured ends of the fibula were placed in apposition, that it might unite, which would serve to keep the limb steady until union of the other bone had taken place, to give such constitutional remedies as the case required, and I was confident the leg might be saved without endangering the life of the patient. That amputation at this time was dangerous and cruel, that his chance of living was infinitely greater without amputation than with, that to save the limb it would require a great deal of time and patience, but that should not be taken into account where the life or limb was at hazard. The defendants did not relish this advice; they urged the necessity of immediate amputation, for fear, as they expressed it, 'that a fever might set in and carry the patient off,' that his age, habits, and the state of the weather were other reasons why amputation should be performed. I knew of no authority in Surgery where age, habits, state of the weather and apprehensions of fever were sufficient reasons for removing a limb. Drs. Riggs and Carpenter coincided with me in opinion, advised the removal of the bone, and dressing with splints. Late in the afternoon I returned home. I saw no more of the case until the 23d of July, ten days after consultation. On Sunday the 22d, a messenger came to my house and informed me that the superintendents of the poor had given Smith liberty to choose his surgeon, and he had sent for me. Monday morning 23d, I met Dr. Carpenter at the almshouse. Found the patient in nearly the same condition as on the day of consultation—the limb rather more distorted; bone still protruding. The heel was very sore from pressure upon the inclined

plane, and had sloughed to the bone. The same kind of dressing; a loose cloth was upon the limb. He complained of much pain in his heel and leg, especially on motion or a jar of his bed. With the assistance of Dr. Carpenter, I proceeded to remove the end of the bone. A retractor was placed under it, and the lower end held by a pair of strong forceps, and the leg supported by an assistant-about an inch of the end was removed with the amputating saw, including that which had lost its vitality. After the removal of the bone, the limb was placed in an easy position and left. At the almshouse I learned that Dr. Patterson, of Homer, had been also requested to assist in taking charge of the patient, and we concluded to defer the application of splints until the next day. July 24th, met Drs. Patterson and Carpenter-applied the proper dressings; cleaned the wound from pus and maggots; brought the edges as near together as possible with adhesive plaster; removed the double inclined plane; applied splints—dressed the heel; placed the limb upon a pillow in the straight position; ordered him quinine, stimulants and anodynes. From this time Drs. Patterson, Carpenter, or myself, saw him daily and dressed the wound, keeping it clean and the bone in place. The wound kept on healing and contracting steadily and progressively, without any bad symptoms ensuing, until union took place, first in the fibula, which served to keep the leg steady without trouble; the tibia next united, and the patient left his bed and went upon crutches. He remained in the almshouse during the winter, but left in the spring and engaged in labor. His leg has become strong, and he walks without difficulty and without much lameness."

Mr. Smith brought suit against Drs. Goodyear and Hyde for that practice in the month of March, 1841, which was subsequently withdrawn by the plaintiffs' counsel, after much testimony had been heard. Why and wherefore we know not.

# FOREIGN INTELLIGENCE.

#### ANATOMY AND PHYSIOLOGY.

On the extreme Rumifications of the Minute Arteries and Veins in the Coats of the Intestines. By Dr. Gaddi, of Modena.

Dr. Gaddi has instituted some researches on the mode of termination of the arteries and origin of the veins in the coats of the intestines, by injecting pure water colored with cinnabar for the arteries, and indigo for the veins, in children from two to five years of age unaffected by any intestinal disorder.

The arteries were filled by a general injection from one of the carotids, the current being directed towards the heart; the veins from one of the mesenteric. When the injection was successful, Dr. Gaddi has observed constantly that the trunks of the intestinal arteries were guided by the peritoneal duplicature to the external layer of the muscular coat of the intestinal tube; they turn around this tunic, and penetrate it, dividing into an infinite number of anastomotic arches, more and more delicate, which traverse the second muscular coat to arrive at the submucous cellular tissue. There they all terminate in a thick tuft of almost imperceptible arterioles, not one of which ever penetrates into the mucous membrane, or terminates by a free orifice. The veins on the contrary always arise on the free surface of the mucous membrane by three, or at most four veinules, which in most cases have a visible funnel-like orifice, and immediately after penetrating the substance of the membrane, they converge together and unite in the submucous tissue, in a vesicle from which a very fine venous trunk arises, which latter soon associates with the trunk of the artery; passes with it to the muscular layers, where it divides; reunites into trunks of larger and larger size; and lastly, leaves the intestinal walls, and passes between the folds of peritoneum.

The tuft of very minute arterial ramusculi just described envelopes the venous vesicle ["in a sort of atmosphere,"] so that it is there that the artery discharges itself. The vesicle is the point where the arterial takes the character of venous blood; and it is also the point which puts the two systems in communication, as Dr. Gaddi was assured in the rare cases where the arterial injection penetrated to the venous trunks, to the vesicle, to the branches, and even into the cavity of the intestines. On removing and examining with the greatest care the mucous membrane alone, he has never seen an artery nor venous vesicle, but only the venous radicles in radii. This vascular disposition is constant throughout the whole length of the intestinal tube, from the cardia to the rectum; but it offers some

varieties: thus the mucous membrane of the stomach is better provided with venous radicles, especially towards the pylorus, than that of the duodenum: and they always diminish in number towards the rectum, the quantity being much less in the larger than in the small intestines.

It follows therefore that the generally admitted opinion of anatomists that the arteries and veins communicate by means of an intermediate capillary system is not correct as regards the intestines; that intestinal absorption is sufficiently explained by the capillary attraction of the venous tubes; that this anatomical disposition accounts for the rapidity with which certain substances penetrate into the circulatory system, and which could not take place through the long circle of chyliferous lymphatics; and lastly, it also explains the occurrence of hæmatemesis and melæna, which are nothing more than venous hæmorrhages of the gastro-intestinal mucous membrane.—Revue Médicale. Juin, 1841. (From Memorialle della Med. Contemp.)

#### Ganglia of the Human Heart.

M. Remak, after having for a long time doubted the existence of nerves in the substance of the heart, has at length succeeded not only in demonstrating them, but also their nature; they are chiefly derived from the sympathetic nerves. M. Remak also discovered numerous ganglia, almost microscopical, in the substance of the heart of many of the domestic animals, and on extending his inquiries to that of man, found the same structures present there also. These ganglia he found in the transverse furrows of the heart, especially between the auricles and ventricles, where the nervous plexuses are met with. They are very small, but are easily recognized, by the microscope, to be ganglionic in their structure. It is from this peculiar structure, probably, that the activity of the heart, independent of the brain, may be explained.—Edinburg Med. and Surg. Journal.

New Observations on the Structure of the Gastro-intestinal Mucous Membrane, and more particularly of the Gastric and Intestinal Glands. By Prof. ALLEN THOMPSON.

This paper was illustrated by a series of preparations of the gastric and intestinal glands of man, and some of the lower animals. After giving a sketch of the recent progress of the investigation of the structure of the mucous membrane and its lands, and alluding more particularly to the researches of Boyd, Boehm, Bischoff, Purkinje, Henle, Wasmann, and Baly, the author gave a general description of the structure and distribution of the gastric and intestinal glands in the human subject at different ages, and in the following animals, viz. the pig, sheep, and ox, horse, dog, cat, and lion, badger, porpoise. The author then entered into a detail of some observations which he had recently made on the gastric glands, and on the solitary glands of the large intestine, from which he forms the conclusion, that at an early period of life these glands have all the form of closed vesicles, and that as life advances in the early years they gradually become open-

The author then stated, that he had frequently observed distinct central apertures in the vesicles composing the glands of Peyer in the pig, sheep, horse, and occasionally, but more rarely, in the adult human subject; never, however, in the child nor young subject. The author stated his opinion that the apertures surrounding the vesicle in the form of a zone, do not lead into the cavity of the vesicle. The author gave a minute description of the structure of these glands, and concluded by calling attention to the three distinct points which formed the subject of his inquiry, viz. 1st, the closed vesicular origin of the gastric glands in the child, and their occasional vesicular structure at a more advanced period of life; 2d, the closed vesicular condition of the solitary glands of the large intestine at the period of birth, and the occasional occurrence of this condition at a more advanced stage; and 3d, the occasional open condition of the vesicles of Peyer's glands. He farther adverted to the bearing of these observations on the theory of secretion in general, more particularly that recently offered by Henle, on the probable uses of the intestinal glandular secretions in the economy, and on the changes of these glands in the diseased condition.—Ibid.

On the Anatomical Relation of the Blood-Vessels of the Mother to those of the Fatus in the Human Species. By Dr. John Reid.

In this communication, it was proved, by preparations laid on the table, that numerous tufts of the placental vessels pass through the decidua, and enter by the open mouths of many of the uterine venous sinuses of the mother. Some of these tufts only dip into the open mouths of the sinuses; others extend their ramifications half an inch, and even in some rarer cases, more than an inch from the point at which they enter. That these tufts found bathed in the maternal blood of the uterine venous sinuses, are prolongations of the fætal placental vessels, was proved both by injection and by microscopic examination. Dr. Reid then proceeded to state, that on examining the placental vessels under the microscope, each minute branch of the umbilical arteries is bound up with a single branch of the umbilical vein, and that they go on dividing and subdividing in the same manner-each subdivision consisting of an artery and a vein so closely bound together, as to resemble a single vessel, when seen through the microscope in their uninjected state. All of these branches—each including an artery and a vein terminate in blunt extremities, and there is no cellular tissue filling up the intervals between them. These blunt extremities, in which the branches of the tufts end, form the termination of the arteries, and the commencement of the veins. The inner coat of the venous system is reflected upon the placental tufts which project into the uterine sinuses, and is prolonged over the surface of all the placental vessels, forming sheaths enveloping each branch of these vessels, and thus constituting a kind of sac with numerous and intricate folds, or fringes projecting into its interior. Into this sac, the blood of the mother is poured by the curling arteries, and returns by the prolongations of the uterine veins. Each of the uterine sinuses into which the placental tufts project, may be considered a minuter representation of the structure of the placenta, for we have there fætal placental

vessels resembling the branchial vessels of aquatic animals, covered by a prolongation of the inner coat of the vascular system of the mother, and hanging in a cavity filled with maternal blood.—Report of Proceedings of British Association for Advancement of Science, in Athenaum, Oct. 3, 1840.

#### MR. FERRALL ON THE ANATOMY OF CERTAIN PARTS WITHIN THE ORBIT.

Mr. Ferrall writes a long paper on this matter.

1. Anatomy of the Superior Eye-lid—its Continuity with Fibrous Tissues within the Orbit.—Having placed, says Mr. Ferrall, the eye-lid on the stretch, and fixed it in this position by chain hooks, an incision should be made through the integument, commencing at the superciliary ridge, and extending vertically downwards to the ciliary margin of the lid. In examining the successive layers, those at one side only of the line of incision should be raised, and followed into the orbit; the other half of the eyelid should be left untouched, in order to preserve a view of the section itself afterwards. Having raised the common integuments, and orbicularis muscle, with which every anatomist is familiar, the part which now presents itself is a distinct layer of fascia. When this is followed carefully upwards, it will be found to pass into the orbit, and is the first element of the eye-lid which can be traced into that cavity. Within the orbit, this layer corresponds superiorly to the lachrymal gland—the vessels—and the fat which has been described as pervading every portion of the cavity, and to be in contact even with the globe of the eye. Beneath this layer, however, or among any of the tissues between it and the eyeball, no adipose substance is to be found.

The next part which presents itself in this dissection is, the levator palpebræ muscle. The mode of insertion of this muscle, although exceedingly interesting, does not properly belong to the present inquiry. Beneath the levator palpebræ another fascia, similar to the former, is met with. This also passes into the orbit, and uniting at the edges of the levator, with that already described, seems to constitute a perfect sheath for its accommodation and support.

The part next in order is the tarsal cartilage. Tracing this upwards and backwards, we find that its thin or orbital margin is continuous with another fibrous lamina of greater strength and more remarkable appearance than those already alluded to. Following it into the orbit, it will be found to separate the superior rectus muscle from the globe of the eye, but presenting a well-defined opening, through which the tendon of the muscle passes as over a pulley, to be inserted into the sclerotic coat. The external or orbitar aspect of this fibrous organ is cellular, and will scarely prepare the anatomist for the very different appearance which it presents on its ocular surface, or that in contact with the globe of the eye. This inspection must, however, be made from the front or corneal aspect of the orbit.

2. Anatomy of the Tunica Vaginalis Oculi, and Muscles of the Eye.—As was before remarked, the inspection must be made from the front or corneal aspect of the eye. The following is the mode which I adopt. I divide both palpebræ vertically, and turning the separated portion backwards towards the forehead and cheek respectively, fix them in this position by hooks; the conjunctiva is next

divided at its angle of reflection, where it passes from the internal surface of the eyelid to the ball of the eye. The incision being made, and the edges of the divided membrane separated, the anatomist is at once struck with the inaccuracy of all former descriptions of the parts. Zinn, Soemmering, and all former anatomists, describe the ball of the eye as being cushioned on fat, and in immediate contact with its muscles. Mr. Lawrence, no inconsiderable authority on this subject, and whose opinion may be supposed to represent that of living anatomists, speaking of the anatomy of the conjunctiva, says, "thus, this membrane is reflected from the palpebræ to the whole circumference of the globe, forming a circular fold, which, at the point of reflection, corresponds to the fat of the orbit."

Having, however, separated the divided conjunctiva, we expose, not as has been described by anatomists, a cushion of adipose tissue, but a distinct tunic of a yellowish white color, and fibrous consistence, continuous in front with the posterior margin of the tarsal cartilage, and extending backwards to the bottom or apex of the orbit, where its consistence becomes less strongly marked. By proceeding in the manner I have mentioned, the parts are displayed without any elaborate dissection. The sharp end of a probe, or director, will be sufficient to separate the ball of the eye from the new organ, by breaking gently the fine cellular tissue which connects them. Its color is totally different from that belonging to its external surface, and it is here perfectly smooth, where the eye glides over it in its movements. The muscular substance of the recti muscles is no where visible, they lie on the outside of this tunic, which insulates and protects the eye in the most perfect manner.

The most beautiful portion of this mechanism, however, remains to be described. In the concavity of this tunic, and about half an inch posterior to its anterior or orbitar margin, are to be found six well-defined openings, through which the tendons of the muscles emerge in passing to their insertion in the sclerotic coat, and over which they play, as over pulleys, in their course. The tendons are loosely connected to the edges of those apertures by fine cellular tissue, which opposes no obstacle to their gliding movements.

Mr. Ferrall attributes two important offices to this tunica vaginalis oculi—it invests and protects the globe of the eye, and it regulates the direction in which the muscles of the organ shall exert their force. It especially, according to him, prevents retraction of the eye.—Medico Chirurgical Review.

Microscopic Examination of Lymph. By Professor Bischoff, of Heidelberg.

The fluid examined was taken from two large lymphatics in the neck of a dog. It was quite clear and pellucid, and after some time coagulated, but without assuming a reddish color. It contained some yellowish glistening globules of no great size, having an average diameter of from 1000000 to 1000000 of a Paris inch, the largest being 10000000, the smallest 10000000000. A nucleus and envelope could not be distinguished in them. They were not all quite round like the blood-globules; nor were they granular and nodulated. They were not altered by water, acetic acid, or ether; but in caustic potash they vanished immediately.

Similar globules with the same reactions present themselves together with innumerable very small granules in the white contents of the thoracic duct and in the chyle.—British and Foreign Medical Review.

Microscopic Experiments on Blood, Plastic Lymph, Pus, and Milk. By Dr. LETELLIER, of Saint Leu.

The following are the conclusions at which the author arrives as the results of his experiments: 1st, it is not possible to prove by the microscope that the red globules of human blood are formed of a nucleus and pellicle; 2d, but the microscope and chemical agents prove that these globules are formed of an envelope probably fibrinous, and of a transparent full nucleus; 3d, this nucleus offers the chemical properties of albumen coagulated by an acid; 4th, the albumen is evidently formed of transparent grains, becoming opaque where they are precipitated upon each other by alcohol or acids; 5th, plastic lymph which runs from wounds, carries all the elements of the blood but the red color of the globules; 6th, pus principally contains, (a,) a great number of globules of blood deprived of coloring matter, and rendered opaque; (b,) a small quantity of vesicles of very varied forms and dimensions, formed by cells of fibrine; (c,) the debris of fibrine.

Ibid.

## On the Corpuscles of the Blood. By Martin Barry, m.d. f.r.ss. l. & e.

THE observations recorded in this memoir are founded on an examination of the blood in every class of vertebrated animals, in some of the invertebrata, and in the embryo of mammalia and birds. The nucleus of the blood-corpuscle, usually considered as a single object, is here represented as composed, in some instances, of two, three, or even many parts; these parts having a constant and determinate form. In the substance surrounding the nucleus, the author has frequently been able to discern, not merely "red coloring matter," but cell-like objects; and he points out an orifice as existing at certain periods in the delicate membrane by which this substance is surrounded. In a former memoir he had differed no less from previous observers regarding "cells." He had shown, for instance, that the nucleus of the cell, instead of being "cast off as useless and absorbed," is a centre for the origin, not only of the transitory contents of its own cell, but also of the two or three principal and last-formed cells, destined to succeed that cell; and that a separation of the nucleus into two or three parts is not, as Dr. Henle had supposed in the case of the pus and mucus globule (the only instances in which the separation in question had been observed,) the effect of acetic acid used in the examination; but that such separation is natural, apparently common to nuclei in general, and forming part of the process by which cells are reproduced. The author had farther shown the so-called nucleolus to be not a distinct object existing before the nucleus, but merely one of a series of appearances arising in succession, the one within the other, at a certain part of the nucleus, and continuing to arise even after the formation of the cell. These views he now confirms: and in the present paper shows that they admit of being extended to the corpuscles of the blood.

He then compares appearances observed in the latter with those he had traced in the ovum. These relate to the number of parts of which the nucleus is at different periods composed; the nature of the nucleolus; the communication between the nucleolus and the exterior of the cell; the formation of the contents of the cell out of the nucleus; the final division of the nucleus into the foundations of a limited number of young cells, destined to succeed the parent cell; and the escape of the young cells for this purpose. It follows from these investigations that the corpuscles of the blood are generated by a process essentially the same as that giving origin to those cells which are the immediate successors of the germinal vesicle, or original parent cell; it being also by a continuation of the same process that the corpuscle of the blood divides itself into the minuter objects figured by the author in his former paper on the blood.

He adds, that in its form and internal state the blood-corpuscle found in the adult of certain animals very much resembles that existing only in the fætal life of others. It is incidentally remarked that the fætal brain, at certain periods, appears to consist almost entirely of objects very much resembling those which, in some stages, form the nuclei in the fætal corpuscles of the blood.

The author concludes by expressing his opinion that the mode of evolution of the minute mammiferous ovum is deserving of close attention, in connexion with some of the processes by which nourishment is communicated, and the growth of the body effected at all future periods of life.—Brit. and For. Med. Review.

#### PATHOLOGY AND PRACTICE.

Amaurosis and Night-Blindness produced by Onanism and inordinate Venery. By Robert Crane, M.R.C.S. Kilkenny.\*

CASE 1. Amaurosis from Venery.—October 5th, 1839. J. D., aged thirty-four, under the middle size, slight, but muscularly made, countenance flushed and drowsy-looking; complains of sense of fulness in the head and dimness of sight; to such an extent that he occasionally walks with his hands stretched before him to avoid being knocked, and some weeks ago he walked into the River Suir off the quay of Waterford. The pupils are broadly dilated, the left most so; iris sluggish under light; conjunctiva ad sclerotica are deeply injected; is slightly dyspeptic; bowels confined; pulse ninety, and nothing unusual in its character; was in Steven's Hospital in the early part of the summer, where he was put under mercury; had blistering ointment to his head, and a seton in his neck; thinks his sight was improved by the salivation, but it was as bad as ever in a few days after; but the mercury cured severe neuralgic pains in his arms and legs, which he then labored under. The seton in his neck fell out, and he is now worse than when in Dublin.

This man's complaint is clearly traceable to his having married three years since, and as he states it, "having used sinful means to force, and enable him to gratify desires oftener than nature wanted." The practices were omitted, and the following treatment adopted:—

Cucurbitulæ C. nuchæ, appl. et mittatur sanguis ad Zxv, B. Pil. Coloc. c. gr. x. Ft. pil. ii. h. s. s.

The next day he felt much better; he continued under treatment until the latter end of November, in which time he was again cupped twice, had the seton replaced, and got aperients occasionally. He is now in the perfect possession of his sight.

There is another case, which we omit.

Case 2. Night-blindness from Onanism.—May 4th, 1840. J. Q.—, aged twenty-six, complains that he gets quite blind every evening as it grows dusk, aud remains so until morning breaks; that he has been in ill health these twelve months past, but was not blind at night until about two months since; pupils natural size; iris slow under light; eyes and skin have a dull icteric tinge; pulse one hundred and twenty, and feeble; feels weak, and has lost his appetite; tongue covered with a light brown coat, moist and flabby; had pain in the right side about three months back; right hypochondrium still swollen, and tender under pressure; abdomen tumid, but does not appear to contain fluid; the alvine discharges are scanty, but contain some bile; urine high-colored and small in quantity. Has practised onanism for the last seven years, and to a frightful extent; has nocturnal emissions every night. Was directed to rub tart. ant. ointment over the right side, and to take night and morning the one-sixth of a grain of sulph. ferri, and 4 grs. of Rufus' pill, and to have porter and free animal diet. Under this treatment his general symptoms have improved; the enlargement in the right side is much lessened; the discoloration of the skin is disappearing, and he feels stronger, but the night-blindness still continues. Mr. Cane has commenced quinine with him and he has given up his mal-practices.

CASE 3. Night-blindness from Onanism.—May 20th, 1840. J—— K——, aged eighteen, complains he is blind at night; can barely see stars round a candle; feels weakly; but has no pain or sickness of any kind; is thin and emaciated; pupils a little dilated, and iris slothful: countenance pale; tongue moist, and, as in all those cases, morbidly soft and flabby; pulse one hundred, and feeble: bowels and kidneys acting healthily; admits that he has been practising onanism since he was fifteen years old; has often practised it four times daily—latterly not so often; nocturnal emissions; has felt the blindness creeping on him for the last year; sees perfectly well during the day. The treatment has been an aperient, quinine pills, and nourishing diet. He is rapidly improving; he can now see objects at night, but cannot yet see to read or work.

Mr. Cane presents us with the physiognomy of an onanist, or indulger in gross sensuality. There is, he says, a peculiar expression about the eye, partly caused by a corrugating of the lids at the outer canthus; a peculiar expression of the eye itself, a slow and stealthy mode of moving it over, and up and down an object, a language in the glance itself; while the lips are compressed and protruded, a

"tout ensemble" not easy to analyze, but which the observer of human character soon becomes familiar with, and which, if his station or his profession be one permitting him to master men's secrets, will lead him to recognize a distinct order of the human family, many of whose diseases may be thus traced within a narrow compass, and to a positive source.

He believes that both diabetes and amaurosis are often traceable to indulgences of this description.

"The first case of diabetes mellitus I ever witnessed occurred about the year 1826; that patient acknowledged to me that he dreaded onanism had caused his disease. Since then I have seen ten cases of diabetes; of that number six acknowledged onanism to its most destructive extent, one admitted it to the extent of using partially as a means to arouse passion for sexual intercourse, and the remaining three denied every thing of the kind, whether with truth I know not. But the admission of the other eight made a deep impression on my mind, and I cannot now meet with an amaurotic, or a diabetic patient, in whose case, if, after due investigation, some other cause is not discoverable, without my mind reverting to this, in my practice at least, most frequent source of disease."

We think Mr. Cane has done well to direct attention prominently to the consequences of these vices.

## Morbid Anatomy of Milksickness.

We have received from Dr. J. V. Wagman of New Castle, Ind., an account of the dissection of a man who died of milksickness. The history of the case is not given, but the Doctor is familiar with the disease, and regarded this case as marked with the pathognomic symptoms. The patient, thirty years old, of regular habits and sanguine temperament, had a vigorous constitution, and enjoyed sound health up to the time of the attack. During the progress of the disease, he took no medicine, till a few hours before his death, when all that he swallowed was immediately ejected; so that whatever morbid appearances existed, might, as the Doctor remarks, be legitimately referred to the disease of which he died. The dissection was made fifteen hours after death.

The body was not much emaciated. The skin had a dusky yellowish hue.

The brain and its membranes exhibited nothing remarkable, except perhaps more than the usual quantity of serum in the ventricles.

The stomach presented a number of patches of light brown and scarlet colors mixed. In some places the mucous membrane was thickened and soft. The pyloric orifice was of a scarlet hue. The mucous membrane of the duodenum presented the same kind of patches with that of the stomach; and some parts were dry. The bowel itself, as well as the lower part of the stomach, was much contracted. The other small intestines were pale; the mucous membrane was softened, many portions of it were dry; the glands of Peyer & Brunner were swollen and soft, and some of them appeared to be ulcerated. The cœcum was dry. The colon contained hardened fæces, on which it contracted closely; was drier than other portion of the tube; its color was a dark brown, with rose colored patches. The liver was of a dark color and seemed unusually friable under pres-

sure by the fingers; the gall-bladder was much distended with a black pitchy bile. The pancreas was of a rose color and appeared rather soft. The spleen was much enlarged, of a deep brown color, and very soft. The peritoneum had reddish spots, and there was some increased effusion into its cavity. The kidneys bladder, heart, and lungs were sound.

It is proper to say, that Dr. W. modestly intimates, that his experience in post mortem inspections has not been sufficiently extensive, to give him confidence in his own observations. From our knowledge of him, we have no doubt that he has aimed to make an accurate report of the case. We hope his brethren, in regions where the sick-stomach is endemic, will, as often as possible, follow his example, and like him favor us with the results of their examinations.

Western Jour. of Medicine and Surgery.

## Treatment of Milk-Sickness.

Dr. John Evans of Attica, Indiana, has sent us a short account of a method of treating this disease, pursued for some years past by Dr. Wilson of that town, and lately by himself, which he affirms is almost invariably successful. The prescription is as follows:

Pulv. Rhei Zi.
Magnes. Cal. Zss.—Mix.

A table spoonful to be given in mucilage every two hours, till purging is produced. If vomited up, a new dose must be immediately administered.—*Ibid*.

# Hints for the Administration of Iodine.

Dr. Mojstsovitz, of Vienna, has contributed an elaborate paper to the Medicinische Jahrbucher, on the administration of iodine and its various preparations, in which he has pointed out certain precautions, which are probably not generally known, and the ignorance of which may account for the unsatisfactory results so often derived from their use.

As the feculent matters decompose the preparations of iodine, we find this substance in the state of ioduret of starch, in the stools of persons who eat bread, potatoes, rice, gruel, and vegetables, while taking the medicine. It is therefore necessary to interdict the use of every sort of food containing fecula to patients to whom iodine is given. It is probably owing to a decomposition of this kind having taken place, that we are to explain the inert effects of those enormous doses of the medicine which have been exhibited by some physicians, as Dr. Elliotson, Dr. Buchanan, of Glasgow, and Professor Forget, of Strasbourg. It is rather a curious circumstance that these gentlemen should not have detected traces of the ioduret of starch in the feculent matters of their patients, because Dr. M. informs us that he has never failed to discover it in the stools of such as eat farinaceous substances, while they were taking the medicine.

According to the experience of our author, the use of saline baths greatly promotes the action of iodine on the system. He has also reason to believe that the

activity of its operation is a good deal influenced by the condition of the weather at the time. When the air is clear and dry, it seems to have most effect, and more especially when there was a tendency to inflammatory complaints: whereas, on the other hand, its action seemed to be almost null during the endemic prevalence of smallpox, puerperal fever, and diarrhea.

The crises, which iodine has a tendency to provoke, are salivation, and a cutaneous eruption like scarlatina or miliaria; the secretion of the urine is usually the more abundant in proportion as the diet of the patient is kept low and restricted.

Dr. M. prefers the hydriodate of potash, and the proto and deuto-iodurets of mercury, to either pure iodine or to any other of its preparations. He regards the tincture of iodine as one of the very worst formulæ that can be used: it is more likely, he says, to cause a wasting of the testicles or mammæ, hæmoptysis, palpitations of the heart, &c. than any of its salts.

The dose of the hydriodate which he recommends for adults is about fifteen grains dissolved in distilled water, in the course of the day.

If there be any open ulcers, they should be kept wetted with a solution of the hydriodate; but if the local affection be a tumor, then he recommends that it should be well rubbed with an ointment composed of two parts of the protoioduret of mercury and twenty-four of lard.

The diseases in which Dr. M. has used iodine with advantage are ezena, ulceration of the tongue, palate, &c., various forms of obstinate cutaneous disease and of secondary syphilis, white-swelling and other maladies of the joints, periostitis, tumefaction of the lymphatic glands, scrofulous induration of the subcutaneous cellular tissue, and many other kinds of strumous disease.—Med. Chirurg. Review.

Treatment of Acute Rheumatism with Large Doses of the Nitrate of Potass.

Dr. Brocklesby seems to have been the first to point out the curative efficacy of saltpetre in the treatment of acute articular rheumatism. In his economical and medical observations, published in 1764, he has explained the practice which he found to be most useful. After taking a free bleeding from the arm, when the patient is young and robust, he orders a very copious allowance of warm gruel, in which from one to two drachms of the salt have been dissolved; the patient is to take large draughts of this drink at short intervals. He has given as much as from six to ten drachms of the nitrate, dissolved in from three to six quarts of the gruel, during the course of twenty-four hours. This mode of treatment rarely fails in producing a great relief of all the symptoms in two or three days: and very often a complete cure of the disease is effected, without having recourse to any other mode of treatment, within a week from commencing the treatment. The nitred diluent usually causes very profuse perspiration, and generally also acts upon the bowels; if it does not, an aperient enema should be given occasionally.

It is to be observed that Dr. Brocklesby's remarks are drawn from practice in military hospitals, where the patients are usually robust and healthy.

In 1772, Dr. Macbride, in his introduction to the theory and practice of medicine, recommended the same mode of treatment. Two years later Dr. William

White (Observations on the use of Antimonial Preparations) makes the following remarks on the effects of large doses of saltpetre:

"The employment of this salt, after bloodletting, is very useful in the treatment of acute rheumatism; but it must be given to the extent of an ounce in the twenty-four hours, if the vascular irritation be considerable; small doses are of little service. In many cases of chronic rheumatism also, it is of great efficacy. Administered in the dose of from one ounce to an ounce and a half in twenty-four hours, it often cures the most severe cases of the disease, which may have resisted every other mode of treatment."

The use of the nitrate, notwithstanding such decided recommendations, fell into neglect, and although noticed by M. Bosquillon in his translation of Cullen, was not till 1832 when it was again brought to notice by M. Gendrin. One of his internes at the Beaujon Hospital, M. Aran, has brought together the reports of a dozen of cases treated with the nitrate of potash in full doses, dissolved in copious draughts of a mild demulcent diluent, very nearly according to the directions of Dr. Brocklesby. The dose of the salt varied from four to eight or ten drachms in the course of the twenty-four hours. The average duration of the treatment seems to have been about a week. In many of the cases there were well marked symptoms indicating disease of the heart: these symptoms usually subsided with the suffering in the joints.

The moduc operandi of the remedy was usually as a powerful diuretic and diaphoretic: occasionally too it acted on the bowels.—Journal des Connoissances Medico-Chirurgicalis.

Remarks.—We are generally pleased with the reproduction of any of the remedies which were much used and recommended by the sound practical physicians of the last century, as most assuredly these gentlemen were much less influenced by pathological theories in their treatment of diseases than most of the writers of modern times. That full doses of the nitrate of potash should act beneficially in acute rheumatism, we are quite prepared to expect: for it will be found that all powerfully evacuant remedies, more especially those which act on the skin and kidneys, are more or less useful in this disease. One of the most generally useful of all remedies, in a large proportion of rheumatic cases, is the mistura guaiaci of the London Pharmacopæia; and it is observed that it is usually most beneficial when it acts on the bowels and kidneys. The vinum colchici, or the Dover's powder, may often be added with much advantage to it. Moderate bloodletting, and the exhibition of calomel at bed time, with or without opium, should seldom be neglected at the same time.—Rev.

# On the Treatment of Worms.

1. Ascarides.—Aperient medicines, although they are not to be trusted to alone for the removal of these worms, are generally necessary. Strong drastic purgatives should be avoided. Rhubarb and aloes, with the addition of a small portion of some mercurial, may be given over night, and in the morning a draught of Epsom salts in a bitter infusion will be found to add to their efficacy. Instead of

administering much medicine by the mouth, it is better to use enemata frequently. Common table salt, the muriate of soda, dissolved in chamomile or wormwood tea, to which some oil may be added, will often succeed admirably well. The sulphuret of potash may be used in the same way, or aloes dissolved in milk.

The tincture of the muriate of iron in water has been highly recommended by some writers; by others lime water is much esteemed.

M. Martinet advises that three different kinds of enemata should be administered, one after the other, at short intervals: first, a common purgative injection to evacuate the bowels; then one to kill the worms and bring them away, consisting of common salt, or of vinegar with some bitter infusion; and lastly, an emollient oily one to soothe the irritation of the gut.

Bremser recommends an enema, consisting of the infusions of absinth, tansy, orange peel, and valerian with a small portion of the empyreumatic oil of hartshorn, immediately after each alvine evacuation, as it is more likely then to be retained, and as it will also come more immediately in contact with the animalculæ.

Injections either of cold water, or of a few ounces of olive oil, to which several drops of laudanum or of hydrocyanic acid may be added, will generally relieve the irritation of the anus, which is often so distressing a symptom.

By some of these means, the worms may almost always be dislodged and removed. To prevent their reproduction, it is necessary that the use of a tonic aperient be continued for a considerable time. Pills, containing rhubarb, aloes, myrrh, and sulphate of iron, will answer very well in a number of cases.

A powder, consisting of rhubarb, worm seed (semina santonici) and carbonate of soda, is well suited for children. The patient should be recommended to use a good deal of salt with his food; and vegetables and fruit should on the whole be abstained from.

2. Lumbrici.—Stronger purgatives are necessary for the expulsion of these worms than of the ascarides. A powder, containing calomel, jalap, and rhubarb, is perhaps as good a formula as can be adopted. Rosenstein has recommended a combination of sulphate of iron, jalap, and wormseed powder and sugar, to be taken for three mornings successively; while Stork's favorite remedy was an electuary composed of sal polychrest, jalap, and valerian, a drachm of each, and four ounces of oxymel of squills—in doses of half an ounce three or four times a day to an adult.

Bremser tells us that he derived great benefit from a combination of wormseed, tansy, valerian, jalap, and sulphate of potash—an excellent formula, if the compound was not so nauseous. When the worms are expelled, he recommends a mixture containing tincture of aloes, steel, and elixir of vitriol.

The cowage (dolichos pruriens,) granulated tin, and steel filings have occasionally been used, made into an electuary with syrup or treacle, with advantage; but of late years they have generally been superseded by other remedies. A combination of carbonate of iron, powdered wormseed, and scammony makes a good formula. Equal parts of infusion of senna and of the infusion of the spigelia, or of the decoction of pomegranate bark, may be taken at the same time with benefit.

We have not yet alluded to two of the most powerful anthelmintic purgatives,

viz. croton oil, and the spirit of turpentine. The former has the great advantage of being so easily administered; even the external application of a few drops, rubbed on the abdomen, will occasionally succeed in dislodging the worms. The turpentine may be either given by the mouth or administered in an enema; the oil may be suspended by means of gum arabic in milk or gruel.

Common table salt has been highly recommended against lumbrici by the late celebrated physician, Dr. Rush of Philadelphia, in doses of half a drachm every morning before breakfast for a length of time. A glassful of sea water may be usefully substituted.

The tolerably free use of somewhat salted meat for food, at the same time avoid fruits and vegetables, has often been observed to be attended with much benefit to persons subject to worms.

Friction of the abdomen with some liniment containing turpentine, ox-gall, absinth, aloes, and such like medicines, or the application of a plaister containing assafætida galbanum, camphor, rue, &c. are certainly sometimes useful.

3. Tania.—The spirit of turpentine has of late years almost quite superseded every other remedy for the expulsion of this kind of intestinal worm. In administering it, the physician must be especially attentive to secure its purgative action; otherwise the urinary organs are apt to suffer from excessive irritation. For this purpose the patient should always be instructed to take a full dose of castor oil, or of some other certain aperient, in the course of an hour or two after the turpentine has been swallowed, if the latter has not already acted on the bowels.

It is well known to cause in many instances vertigo and great disturbance of the head, amounting sometimes to a state of complete intoxication; but these symptoms will gradually subside. The essence of lemons is perhaps the best disguiser of the unpleasant taste of terebinthinate medicines. Chewing a piece of orange peel immediately afterwards will often relieve the nausea.

The pomegranate bark, either in the form of powder or of a strong decoction, has been successfully used by several medical men. One or two scruples of the powder in a wine-glassful of cold water is to be repeated every hour to the fourth, fifth, or sixth dose. If the worm is not expelled, the same medication is to be repeated on the following day. The decoction is the form in which it is generally used by the French physicians; it is prepared by boiling two ounces of the bark in a pint of water; a wine-glassful is to be taken every half hour or so, till half the pint is swallowed. It is well to follow it up with a purgative, in case it does not act on the bowels.

Most of the remedies, which we have alluded to as useful against *lumbrici*, have been employed by different practitioners against tape-worms.

A combination of tin filings, fern root, wormseed, scammony, gamboge, and sal polychrest is a favorite remedy in some parts of Germany. Should the worm be partially extruded from the gut after a stool, the patient should continue to sit over the night-table, and swallow repeated doses of a solution of Epsom salts, or of any quickly-acting aperient, to induce further evacuations until the entire worm be expelled. Any attempts to pull it out with the fingers, or by affixing a portion of thread or tape to it, will almost always fail.

A course of vegetable and metallic tonics, with the addition of gentle aperients, should be continued for a length of time: the best are pills composed of aloes, rhubarb, and steel, along with some vegetable bitter infusion to which alkaline or neutral salts are added.—Medico Chirurgical Review.

### On the Treatment of Diseases deemed Incurable. By Professor Forget.

Bacon, in his celebrated work De Augm. Scient., uses these prophetic words:—Neque igitur dubitabo inter desiderata reponere opus aliquod de curationibus morborum qui habentur pro insanibilibus. We have not indeed the presumption to suggest any remedy or remedies for those diseases that are usually considered incurable; our only object is to draw the attention of medical men to a subject which well deserves their most serious reflection.

We do not propose to canvass the question what diseases are, and what are not incurable, as this would lead us into a tedious and perhaps unsatisfactory discussion of terms; nor shall we venture at the present time to endeavor to explain how such diseases usually prove fatal to live.

In the case of such organs as are double, nature herself sometimes supplies the deficiency caused by the destruction of one of them; we may allude, for example, to certain cases of the destruction of one kidney, or of one testicle, &c. The destruction of parts, which are not essential to life, can be viewed only as an infirmity. Eh bien! let us take the case of the most noble of all the viscera, the encephalon. Now it is an admitted anxiom in cerebral pathology, that the destruction of those parts, which preside over certain nervous functions, causes the definitive abolition of these functions. Is this axiom true in all cases? Are there not examples of apoplexy, of softening having induced the melting down (fonte) of a part of the brain, and of protracted paralysis, which nevertheless have ultimately been cured? In propounding this axiom, have pathologists calculated all the resources which nature can develop by means of nervous anastomoses, and all that may arise from following out a judicious and persevering course of medical treatment? Such fortunate results are rare, it is true; but that they do exist, cannot be disputed: and, despite the proverb, these exceptions, it must be admitted, really do invalidate the rule.

Now what is true of the destruction of organs, must, a fortiori, be still more so of the alteration of tissues. The greater number of organic lesions consist in the deposition of matter, which is either analogous or not to the natural tissue of the part. Eh bien! Nature possesses a power directly opposed to this tendency to abnormal secretions—viz. absorption: the difficulty consists in putting it into operation. Perhaps the mechanism, or modus operandi, of our alterative and discutient remedies only consists in the property of quickening this power of absorption.

As to the morbid states called functional or dynamic, in which there is no appreciable alteration of tissue, as we are ignorant of their essence, we have always a right to anticipate a cure of them. This remark is, we suppose, intended to apply to such diseases as tetanus and hydrophobia.

These considerations, which might be easily extended, are so many motives for encouragement to attempt the cure of some diseases that are still deemed incurable, although it must be confessed that we must not allow ourselves to be at all sanguine about the results, and we should ever be on guard against being misled by many statements which we every day hear of marvellous cures of such and such disorders.

There lies the difficulty of practice; for the more rebellious that a disease is, the more energy is required in attempting to subdue it, and the greater is the danger of active remedies causing the supervention of fresh accidents on the original malady. To know when to do nothing is a precept but little understood by the majority of medical practitioners, who seem to imagine that there is always a possible remedy for every form of disease, whatever that may be.

But listen on this subject to some of the oracles of our profession. Frank expressly tells us, "when a disease is recognised to be incurable, we ought to abstain from all vain efforts to try to cure it; and this precept is especially applicable to such therapeutic means as are unpleasant and painful. The medical man who employs such is no better than an executioner; it is better that a patient should sink under his disease, than that he should die from the effects of any remedies that are employed." Sydenham and Stoll have expressed the same sentiments; and Tissot very justly remarks, "it is the part of a skilful physician sometimes to prescribe no medicines at all."

Pernicious Effects of powerful Remedies in Chronic Diseases.—In truth, how many paralytic patients sink under some cerebro-spinal lesions excited by stimulating remedies of the nervous system, such as strychnine for example! How many phthisical patients fall a sacrifice to a colliquative diarrhæa, aggravated by the use of pretended incisive and solvent (fondants) medicines, as alkalis, which only serve to irritate the mucous membrane of the stomach and intestines! How many dropsical patients suffer from the use of drastic purgatives, or of powerful diuretics and diaphoretics, all of which must primarily act on the alimentary canal! How many unfortunates, laboring under some organic disease of the heart, or liver, or spleen, are poisoned by the injudicious administration of digitalis, mercury, iodine, &c! and, lastly, do we not often see the system undermined by the continued use of arsenic and other irritants in hopeless cases of cancer and other incurable disorders!

It would be easy, says M. Forget, to extend the catalogue of this lugubrious litany, known only to the consciences of medical men. Much evil has resulted from that perfidious maxim of Celsus. "Melius est anceps remedium adhibere quam nullum:" there is much sounder wisdom in that which inculcates upon us, "primo non nocere," and in the advice of Stoll, "Nil magni facias ex merâ hypothesis."

Some, we know, will object to these remarks which we have now made, and charge us with unnecessarily abridging the useful exertions of the physician. It is not the use, but the abuse, of remedies that we are condemning. Even in the case of hopelessly incurable diseases, much may be done by the judicious medical man in the way of soothing pain, calming mental distress, and sweetening and even prolonging life: such is one of the most holy duties of our noble profession.

When Sydenham said that without opium he would renounce practice altogether, he no doubt had in view the long and mournful catalogue of chronic maladies, the suffering from which may be so often mitigated by this and other analogous medicines. Let us learn then how to assuage the pains which we cannot prevent, and even when we fail in our best endeavors, let us learn how to console the sufferer.

As to the means best fitted to limit, if not arrest, the ravages of incurable diseases, they may be all deduced from an important law of pathology, which is far too little understood and acted upon; it is that many chronic maladies prove fatal by the complications which they call into action. Thus apoplexy often kills by the softening of the cerebral substance induced by the extravasated blood, which has been acting like a foreign body; pulmonary tubercles excite a sub-acute inflammatory action in the surrounding parenchymatous tissue; aneurism of the heart and hypertrophy of the liver, by the serous and sanguineous congestions which they give rise to; and cancer, by the exhaustion of the whole system, and by the cachexia brought on from the absorption of ichorous matter into the blood.

Without, therefore, vainly persisting in attempts to withdraw the cerebral coagulum, the removal of which can only be the slow work of nature, let us strive to combat the congestion that is induced by this fatal thorn: without trying to melt away rebellious tubercles, it is better to check and dissipate the inflammation which exists around them; without endeavoring to modify the nutrition of an hypertrophied heart or liver, diminish the quantity of blood that passes through them, and draw the irritative process outwardly, and act gently on the various emunctories of the body; and without ever dreaming of extirpating an organ like the uterus, when corroded with cancer, support the system by mild food, and keep the surface of the ulcerated parts clean with anodyne washes.

Whatever be the disease that exists, soothe and mitigate pain; for this not only exhausts the frame, but inevitably aggravates the local mischief. While we pursue with prudence and modesty our sanatory labors, it sometimes happens that kind nature crowns with unexpected success our submission to its mysterious decrees; in combating the auxiliaries, we sometimes will triumph over the principal enemy: in several cases the apparent cure of phthisis in our own practice has been the effect of a treatment purely lenitive, and in no manner specific; in truth, chiefly of a mild regimen.

Much may unquestionably be often done by a judicious regimen: "Abstinentia et quiete multi magni morbi curantur . . . . . . optimum medicamentum est cibus opportune datus," says Celsus; and Jos. Frank confirms the opinion of the Roman: "dietetic regimen constitutes at once the most certain and the most copious source of therapeutics. A great number of diseases are in truth to be cured much more surely by the judicious selection of food and drink, by change of residence, amusement of the mind, &c. than by all our arsenal of medicines;" and how substantially true are these few words of the great English physician, Sydenham; "It has often occurred to me that in the treatment of diseases we go on too fast, and that we should leave much more to be done by nature."—Gazette Medicale de Strasbourg, No. 1.

## Annual Report of the Vaccination Committee of France.

THE following are the general conclusions of this Report read by M. Gauthier de Claubry, at the Royal Academy of Medicine.

- 1. In the epidemics of small-pox which have occurred in different departments, vaccination has unquestionably continued to possess the power of arresting the evil, by reducing the genuine variola to a varioloid disease.
- 2. Throughout France the immense majority of those who have been some time vaccinated has remained unaffected either by the sporadic or by the epidemic variola, although in immediate contact with those who were suffering.
- 3. Vaccination invariably induces a favorable modification on the course of variola, whether the disease was in its early or in its advanced stage.
- 4. Some cases of varioloid disease which nearly resembled variola, and several even of variola itself, have occurred in vaccinated persons, although many of the observations are manifestly incorrect. For, on the one hand, the appellation of variola has often been given to an eruption which has lasted only three days; and, on the other hand, it is but too apparent that many of the certificates of an alleged successful vaccination cannot be trusted to. We can confidently affirm that after an attentive examination of numerous cases of variola and of varioloid eruption occurring after vaccination, we have always found the disease to be less severe than eruptions of the same nature appearing after a first attack of variola.
- 5. The majority of observers deny that the vaccine virus has undergone any change by having been transmitted through a multitude of persons. Several practitioners have vaccinated one arm with the ancient, and another arm with the renewed, virus, and the vesicles on both arms have been observed to be quite the same.
- 6. Most medical men disapprove of re-vaccination, at least as a general measure, on the ground that, by thus exhibiting a want of faith in the protecting powers of the remedy, the confidence of the people would be inevitably much shaken, and greater difficulty than hitherto would be experienced in inducing them to submit to it. Moreover, the partisans of re-vaccination are not agreed as to the proper time of resorting to it.
- 7. In 1839, of 6652 re-vaccinations, which were carefully watched, a pustule similar to the normal one was observed in 718 cases; in 1283 cases the pustule was of a doubtful character; and in 4651 the operation failed completely. It thus appears that a large majority of persons are not capable of contracting vaccinia twice, and consequently that re-vaccination is generally useless.
- 8. Even when re-vaccination has had a positive result, it has not always protected the person from the contagion of variola.
- 9. Even supposing that re-vaccination had the effect of bestowing complete protection, we could not in this way hope to extinguish the variolous infection, as it would be almost impossible to cause it to be adopted as a universal measure.
- M. Piorry observed that he heard with regret the statement in the preceding report, that, re-vaccination should not be adopted as a general measure. I have, said he, practised re-vaccination in a great number of cases, and without having

kept an exact account of the cases where it produced a positive result, I may confidently affirm that, in a fourth or fifth of the cases, the operation has induced a local eruption, the characters of which are to those of genuine vaccinia as the characters of the varioloid disease are to those of genuine variola. Is it not, therefore, possible that re-vaccination might protect from the varioloid disease, which we know is sometimes very severe, as the first vaccination does from variola itself? For this reason I am of opinion that some of the conclusions of the report be not so decided and peremptory as they at present stand.

M. Bousquet:—From the trials of re-vaccination, of which I have been able to verify the results, it follows that, of 138 operations, a perfect normal pustule was induced in 30. I re-vaccinated 90 persons at Versailles, and of this number I obtained 37 genuine vaccine pustules. These results are conclusive, in my opinion, in favor of re-vaccination; the facts cannot be disputed, for they occurred under the inspection of two excellent practitioners at Versailles, MM. Vitary and Boucher.

Several other members of the Academy, including M. Bouillaud and M. Dubois, agreed with the preceding speaker, that the report of the committee was too decided and peremptory in some of its conclusions.

Remark.—It would seem that the results of re-vaccination are very different in different countries. No where has it been practised with so much success and on so large a scale as in some parts of Germany. We observe that, during last year, 42,522 soldiers in the Prussian army were re-vaccinated; in 34,573 of whom distinct cicatrices on the arm were present, in 6,177 the cicatrices were indistinct, and in 2,772 none were to be seen. The progress of the re-vaccination is stated to have been regular in 20,952 persons, irregular in 8,820, and to have failed in 13,750; in several of the last the operation was repeated, and with success.

The more that we consider this important question, the more convicted are we that many statistical reports are little to be trusted to, as affording safe or conclusive data to build general deductions upon. Unfortunately a great number of first vaccinations are reported to have been successful, without having been properly examined.—Rev.

# Clinical Remarks of M. Andral on Fever and Inflammation.\*

- 1. State of the Blood in Symptomatic and Idiopathic Fever.—1st. If the fever be symptomatic of inflammation, the quantity of fibrin is augmented; but this increase does not depend on the fever, for there are several fevers, just as intense and long continued as the inflammatory, in which we observe no increase of fibrin; the cause of the increased quantity of fibrin is not easily discovered, and to assign any particular one, in the present state of our knowledge, would be hasty.
- 2d. When the fever does not depend on inflammation, we have no augmentation of fibrin, be it ever so severe or prolonged.

3d. Should simple fever become complicated, during its course, with any inflammatory affection, then the fibrin increases.

4th. Fever and inflammation may co-exist, the latter being an essential element of the former, as inflammation of the skin in small-pox, measles, scarlatina, &c.; these affections of the skin, which perhaps should not be ranged under inflammations, are unattended with the characteristic increase of fibrin; the same remark applies to ulceration of the intestines in typhoid fever; however tenaciously some physicians may adhere to the inflammatory doctrine of typhoid fever, it is certain that the ulcerations of the intestinal glands are not accompanied by that increase of fibrin which attends other inflammatory diseases. Hence, whenever fever co-exists with inflammation, and together with it constitutes one of the elements of the disease, the fibrin of the blood is not increased; for example, small-pox, typhoid fever, &c. But it is far different when inflammation springs up during the course of the fever, or is one of its effects.

In a certain class of fevers, the chief cause seems to be the excessive richness of the blood. Inflammatory fevers, of a few days' duration, depend upon this cause.

This richness consists in an increase of the globules, not of the fibrin. The same increase occurs at the commencement of typhoid fever, measles, and scarlatina. We do not find this augmentation of globules in inflammation; it exists in the middle period of fevers.

In continued fevers, the febrile movement persists even when the globules have fallen to their normal standard, or below it. M. Andral instances chlorosis.

Fever may exist with a normal state, increase, or dimunition of the globules. We find that the simple presence of fever never determines an increase in the quantity of fibrin; that fever may exist: 1st, when both fibrin and globules are in normal quantity; 2d, when the globules alone are increased, the fibrin remaining unchanged. The quantity of fibrin may fall, during typhoid fever, even so low as 0.9; at an early stage of the disease, or when it is mild, the fibrin remains unchanged, but falls as the fever is aggravated; when it assumes an ataxic character, and symptoms of prostration ensue about the fifteenth day, the fibrin also falls; but this is not the case with inflammation.

2. State of the Blood in Inflammation.—The condition of the blood in inflammation differs according as the latter is acute, subacute, or chronic.

Fibrin.—The fibrin is always increased during inflammation; it may vary from four to ten.

Globules.—These are not necessarily augmented; generally speaking, they retain their normal standard: in rare cases are increased; in others diminished. As the inflammation advances the globules may fall, but this is the effect of bloodletting and abstinence. We have already seen that plethoric persons are not more disposed than others to inflammation.

Solid contents of Serum.—The albumen may be increased, but not necessarily, and the inflammation may attain a very high degree of intensity, without augmentation of the serum.

Physical properties.—The clot is generally very firm and tenacious, because the fibrin has expelled a great proportion of the serum; in fever, on the contrary, the

serum is retained, and renders the clot soft and voluminous. In inflammation the clot is small: for as it contains a large portion of fibrin, the globules are firmly pressed together by the contraction of the coagulating part of the blood.

3. Nature of False Membranes and Pus.—Whenever inflammation terminates in suppuration, the quantity of fibrin increases; hence, the formation of pus and augmentation of fibrin accompany one another; we might indeed, add another phenomenon, viz. the formation of false membranes. The fibrin is also augmented in cases where the serum is turbid and mixed with flocci; on analysing false membranes they are found to be composed of fibrin, and this is confirmed by a comparison of false membranes with the buffy coat of blood, to which they bear a perfect resemblance.

Pus is a compound fluid, the composition of which is not yet accurately known; we are unable to assert that it is formed of fibrin, but in certain kinds of pus we find a white substance analogous to fibrin.—Medico Chirurgical Review.

## Dangers of Opium in Delirium Tremens.

DR. WARE, of Boston, publishes a table of sixty-nine cases of delirium tremens, treated in different ways.

Treatment.	Number of Cases.	of Bled.	Died.	Recovered.	Complicated with acute Diseases.
Opium, large doses	8	• • •	4	4	1
" small	7 .	1	2	5	1
Emetics	12 .	1	1	11	2
Bleeding	2 .	2		2	
Eclectic	9.	5	3	6	7
Quinine	1 .		• •	1	1
Mercurials	1 .	****	* *	1	
Expectant	29 .	4	• •	28	1
	69	13	10	58	13

It appears, that of fifteen cases in which opium constituted the principal remedy, six died; whilst of fifty four in which opium was not used at all, or only incidentally in small quantities, only five died. Still further, if we separate from these fifty-four, the nine cases in which the treatment was eclectic, and in which the mortality seems to have arisen from the combination of acute disease, we have a remainder of forty-five cases, of which only two were fatal. Again, if we compare the mortality of those cases in which opium was pushed to the full extent advised by writers on this disease, with those in which no active remedy was employed, we have a mortality of one in two, against a mortality of only one in twenty-nine.

This difference in the result of treatment would seem altogether too great to be attributed to accident, and goes far to establish the truth of the opinion formerly expressed, that opium given in large doses is actually injurious to patients laboring under delirium tremens. But even admitting it to be possible, that

the great proportion of fatal cases occurring where opium was used, was accidental, it certainly, I think, will not be contended, that the favorable termination of the cases not treated by opium, was also owing to accident. And it will certainly follow that opium, if not actually injurious to these patients, is at least useless, and that our success in this disease will be sufficiently satisfactory without it.

It is certainly difficult to argue against figures, but we are tempted, notwith-standing, to doubt these conclusions. We recollect what delirium tremens was before the opium practice was in common use, and what it is at present, and we can scarcely bring our minds to believe that that practice is not a great improvement. We do conceive that the change of practice has succeeded to a great extent. But those who prefer the old plan, who would rather—

Stare super antiquas vias,

may appeal to Dr. Ware's paper.—Medico Chirurgical Review.

M, Velpeau: New Application to Erysipelas, with Remarks on other Remedies.

M. Velpeau informs us that of late he has been using a solution of the sulphate of iron with most decided advantage, as an application to parts affected with erysipelas. According to his experience its effects are, in most cases, very rapidly useful, the inflammation usually subsiding in from twenty-four to forty-eight hours after it has been applied.

He talks of its seeming to have some specific action, and goes on to say: "we maintain that this topical remedy is the only one which, as far as we know, so quickly arrests erysipelatous phlegmasiæ. (!) Its action is strictly local and confined to the part to which it is applied; for he has often seen the erysipelas disappear in a part that was kept wetted with the solution, while the circumferential parts were more or less affected with it.

M. Velpeau then comments on the results which he has obtained from the use of other local remedies.

Compression.—His remarks are so pertinent in some respects, and so truthfully expose the senseless conduct of too many in our profession, that we shall give them:—

Ignorant Abuse of Remedies.—"Medical men, falling into the deplorable confusion which we have so often pointed out, have applied the remedy right or wrong, by hook or by crook (à tort et à travers,) sometimes for one case, sometimes for another, and meeting either with success or failure as chance might happen, and of which they could give no rational account, they have, as might be expected, come to the most opposite conclusions. Thus some practitioners have applied compression to all sorts of cutaneous inflammation alike; to angioleucitis and to phlebitis, to simple erysipelas and to diffused phlegmon; whereas the remedy, even when judiciously employed, is useful at first only in the treatment of phlegmonous erysipelas employed, is useful at first only in the treatment of phlegmonous erysipelas, and in some cases of angioleucitis and phlebitis. It is utterly inefficacious in arresting the progress of simple erysipelas."

It is not to be supposed that we quite assent to the truth of these remarks of M. Velpeau; compression has always seemed to us a very questionable remedy in any form of cutaneous inflammation, except when the disease is in a chronic or very subacute stage. It is but too true, that we can very rarely allow ourselves to be guided by the French writers as to the treatment of diseases: they are excellent morbid anatomists and clever operators, but their ratio and methodus medendican seldom be imitated with advantage.

The Nitrate of Silver.—Our author is not very favorable to this remedy, which has been so much vaunted by English and American writers:—"These gentlemen seem to me to have acted very confusedly; for it is almost impossible to determine in what form of cutaneous inflammation the remedy has been found chiefly useful. I have used it in upwards of thirty cases; in some, applying the caustic to the affected surface directly, in others around its circumference; occasionally the remedy has seemed to be useful, but more frequently it has utterly failed. Sometimes, indeed, it has appeared to arrest the progress of the inflammation; but in most cases this was merely temporary, and the zone of the cicatrization did not ultimately prevent its extension. I have given a fair trial to the remedy by applying it to one limb that was affected with erysipelas, and treating another limb of the same patient in another manner; and I have found that the former was often the more tardy of cure. On the whole, therefore, I regard the nitrate of silver, 'comme un moyen inutile et à laisser de coté.'"

M. Velpeau is not more favorable to the use of the acid nitrate of mercury as a local application to erysipelatous surfaces, although it has been recommended by MM. Biett and Cazenave, and extensively employed by them at the Hospital St. Louis.

He disapproves also of blisters as a remedy for erysipelas, although they were so highly praised by the late Baron Dupuytren. He has no better opinion of spirituous and camphorated lotions; or even of the irrigation from a continued stream of cold water, a remedy which has, of late years, been recommended with such enthusiasm by some practitioners. At first the most marvellous cures were effected by this remedy of remedies; but alas! on further trial of it, in the hands of unprepossessed experimenters, it was found wanting. We have always reason to distrust a remedy that is announced to have such extraordinary healing powers. The pool of Bethesda itself could not work greater wonders than the continued irrigation from a stream of cold water on an erysipelatous surface, according to some reports. But the dream has passed away, and now it is discovered that the remedy is not only inefficacious, but is also, in not a few instances, absolutely prejudicial, exposing the invalids to catarrhs, rheumatism, and milles autres accidens.

Then again, the inunction of mercurial and other ointments, a practice that has been so lauded by many of his fellow-countrymen, is reported by M. Velpeau, after a pretty extensive experience of its use, to be utterly destitute of any appreciable advantage. It possesses no power of arresting the inflammatory action; and at best it serves only to abate somewhat of the heat and sense of burning which generally accompany erysipelatous affections.—Journal des Connaiss. Medicales.

Remarks.—On the local treatment of erysipelas, as indeed on most topics of practical medicine, French writers are certainly not our best advisers. They are so deficient in a knowledge of general and fundamental principles to guide them. that they seem to be tossed to and fro before they can ever decide on almost any subject appertaining to the management of disease. For example, take the present case. We believe that most British practitioners will agree with us, that topical treatment is of secondary importance only in the cure of erysipelas, unless, indeed, where the disease is obviously the result of a local irritation, such as of leech-bites, &c. The question of chief importance, at least when the disease is severe, and accompanied with constitutional disturbance, is whether we are to adopt an antiphlogistic, or a stimulating and tonic treatment internally. Much mischief has been done by laying down too absolutely and dogmatically a certain line of practice, to be followed in all cases of the disease without distinction. Now this is a very serious practical error. One set of cases will be found to require depletion and a lowering regimen; while another set of cases will be best treated with the administration of opium, quinine, beef-tea, and perhaps also wine or brandy. The wise physician will be regulated by the state of symptoms in each case, as well as by the medical constitution of the season, and the type of the prevailing diseases at the time.

With respect to the local treatment, this also will require to be modified according to the character of the constitutional symptoms, as well as by the condition of the affected parts. Perhaps the safest, as well as the most useful application in the majority of cases will be found to be a weak spirituous lotion, used tepid. There cannot be a doubt that considerable risk is incurred by employing any means likely to repel the cutaneous inflammation suddenly; but this is certainly no sufficient reason to reject all topical remedies, or to be satisfied with such innocuous substances as flour, chalk, carded wool, &c. The composition of the lotion may be advantageously varied according to existing circumstances, by the addition, for example, of varying proportions of the liquor plumbi, liquor ammoniæ acetatis, acidum hydrocyanicum, &c. The addition of an ounce or two of spirit of rosemary to eight or ten ounces of camphor mixture will, for a large proportion of cases, make an exceedingly good application—to be used tepid. By covering the parts with a piece of oiled skin, they are kept uniformly moist, without being apt to become too much chilled.

As to M. Velpeau's opinion, that a solution of the sulphate of iron has any specific effect on erysipelatous inflammation, we need scarcely say that it is quite fanciful.

A solution of sulphate of zinc, or of any mild astringent, would answer quite as well; and moreover have the advantage of not staining the linen of the patient or of his bed.

What must surprise the reader is, that an experienced surgeon like M. Velpeau should have such vague notions of therapeutic principles as to write a lengthened paper for the purpose of announcing to the public the discovery of a nouveau topique for the treatment of erysipelas. But such is the character of too many of the French school. Excellent anatomists and pathologists they are; but in practical medicine, or, in other words, in the treatment of diseases, they seem to be woefully deficient.—Rev.

## SURGERY AND MIDWIFERY.

Bowen's improved Apparatus for managing Fractured Limbs.

"It is the best apparatus, I say unequivocally," says Dr. Parker, of New York, "that I have seen. It embodies all the advantages of Boyer's, Desault's, Gibson's, Bell's, Amesbury's and Smith's, with other merits of much importance, which none of these last-mentioned instruments possess." Dr. Cadwell, a surgeon of Watertown, N. Y., assures us that this is admirably constructed for making extension; and from a close examination, we think, for ourselves, that it is a highly ingenious piece of mechanism, which must fulfil the intentions of the artist. The manufacturer is Mr. Nathaniel S. Raymond, a New-England mechanic, who resides at Utica, N. Y., where orders may be sent. The agents in Boston are Messrs. Brewer, Stevens & Cushing, druggists, No. 90 Washington street. A complete machine for the leg and thigh is left with the editor, which is for the inspection of any who have either curiosity to gratify, or a desire to possess an important, useful surgical instrument. A description of it is wholly out of the question. Even with a plate there would be a difficulty in exhibiting the sliding joints: it must be seen to be understood or appreciated.—Boston Med. Sur. Journal.

## Tetanus, cured by section of the Nerve supplying the part.

M. Pecchioli has reported, in the Bulletin of Medical Science of Milan, two cases in which he cured tetanus by section of the nerve supplying the part. M. P. says that he had before proposed this operation to a patient, who, however, was unwilling to submit to it and died of the disease. Soon after he met with a well marked case in a young peasant, aged seventeen. The tetanus was caused by a lacerated wound of the great toe, penetrating the metatarsophalangean joint; it had continued twenty-four hours. I made, says M. P., an incision eight lines in length, at the point where the saphena passes over the first cuneiform, after having sent a twig to the back of the foot; then I plunged the instrument quite to the bone, to secure the complete division of the nerve. The pain in the leg and foot ceased immediately, and soon after the spasmodic contractions disappeared to return no more. The other case is similar. The editor of the Parisian Medical Gazette commends this operation, and suggests that the section of the nerve could best be made beneath the skin, as in tenotomy. The operation would in that way be a very trifling one, and might be tried in all cases. We shall certainly do so in the first case that offers .- New York Medical Gazette.

# M. Dubois on the Signs of Pregnancy.

In treating of the signs of pregnancy furnished by the state of the mammæ, M. Dubois says—

"In a pregnant woman, the puffy swelling of the areola is a sign to which Professor Hamilton of Edinburgh attaches the greatest importance, because it is,

according to his experience, never to be observed in those who have not been exposed to conception. We observe indeed occasionally in maiden women some unusual appearances in the arcola, but never the genuine boursoufflement. The accuracy of this opinion has been questioned by several physicians: but I must acknowledge that I am quite inclined to agree with Dr. Hamilton. Unfortunately the character of the arcola to which we allude is far from being uniform or constant; but, when it is present, we regard it as one of the most trustworthy of the signs of pregnancy."

He afterwards remarks:—"The areola in a pregnant woman assumes a darker color; it exhibits minute papillary eminences, which existed indeed before-hand, but which become more distinct and elevated; and in some cases it is raised up, prominent, and as it were ædematous. Around this first areola there is usually noticed a second one, which exhibits a spotted appearance. The veins of the mamma also are much larger than before. The elevation of the areola, now described, is unfortunately rather a rare occurrence; for it is a very important one, and almost infallibly indicates the condition of pregnancy."

The Discoloration of the Areola.—There is much discrepancy of opinion among accoucheurs as to the value of this sign; some regarding it as very characteristic, while others attach but little importance to it. The anecdote of Dr. William Hunter on one occasion pronouncing, from the presence of this sign in a female subject brought for dissection, that she was pregnant, is well known. M. Dubois acknowledges that the sign is a valuable one; for it is certainly present in a very great number of pregnant women; but he reminds his readers that its value is considerably diminished for the following reasons:—very frequently it is not observed at all, or it is very indistinct, in women of a fair complexion; the dark color almost always remains more or less decided, when once a woman has conceived; and, thirdly, in certain uterine diseases the areola is apt to be discolored, although the woman has never been exposed to the chance of impregnation. He adds: "each of the signs now mentioned—the discoloration of the areola, the secretion of milk, the prominence of the papillæ, and the puffy elevation of the areola—taken separately, cannot be well trusted to in any case; except perhaps the last, and this unfortunately is only of occasional occurrence. But when they are co-existent in the same case, they will generally be found sufficient to determine the presence of pregnancy."

M. Dubois makes repeated allusion to the recent researches of Dr. Montgomery of Dublin; but, while commending them for their accuracy in the main, he is inclined to believe that he attaches rather too great importance to some of the signs furnished by the state of the mammæ. He professes his inability to give any opinion as to the value of the sign that has been drawn from a change in the color of the lining membrane of the vagina. "It has been alleged that when impregnation takes place, the surface of the vagina assumes a peculiar purplish or violet-blue color, which seems to be the result of sanguineous congestion in the part. This discoloration is said to commence in the second month of pregnancy. It is considered by some writers as a certain sign of pregnancy, provided no hæmorrhoidal disease be present at the time; for this also is said to induce a change in the color of the vaginal mucous membrane. M. Jacquemin,

physician of La Force prison, in which there is always a great number of prostitutes, has stated in a work upon this subject, that he has very frequently observed the discoloration, and that he has always found it dependent upon pregnancy. His observations have been made on between four and five thousand women: and in no one instance has he been mistaken in his diagnosis, when this sign was present. As a matter of course it requires the speculum to be used to detect it properly. M. Dubois confesses that he can say nothing in its favor from the results of his own experience. It is to be remembered that it is admitted by M. Jacquemin himself, as well as by others who have faith in it, that the vaginal membrane may acquire a darker color than usual from other causes besides pregnancy. If a woman be examined with a speculum immediately after the cessation of the catamenia, the cervix uteri and the vagina will be observed to be more or less congested. It is well known that, during the season of rutting in animals, there is always a turgescence of the generative organs. Whatever, in short, tends to cause a more than usual flow of blood to these parts will probably induce some change in the color of the lining membrane of the vagina."

The attention of obstetrical practitioners has of late years been directed by several writers to the state of the urine during pregnancy. Dr. Golding Bird describes the peculiarities which the secretion exhibits in the following terms. If put aside in a glass vessel for two days, it was observed to become much troubled; innumerable globules, having a greasy or fatty aspect, appeared on its surface: after another day or two, it became completely covered with a pellicle, resembling that which forms on mutton broth when cooling: and, on the sixth day, this crust broke up and fell to the bottom. These appearances were observed in nearly thirty cases. Submitted to the microscope, the pellicle exhibited beautiful triangular prisms of triple phosphate of magnesia, contained in a mass of granular matter, and here and there patches of tolerably regular globules. Dr. Bird has observed the phenomena, now described, in the urine as early as the second month of pregnancy; and he assures us that he has derived great assistance in the diagnosis of pregnancy from attending to them. It will be very interesting if his observations are confirmed by the researches of others.—Gazette des Hôpitaux.

#### CHEMISTRY, MATERIA MEDICA AND PHARMACY.

The Tinctura Ferri Sesquichloridi in Discharges of Blood from the Urethra.

Mr. Clay, of Manchester, has contributed some observations on this subject to the Lancet. He says:—In all cases where great discharges of blood have taken place by the urethra, it is generally remarked that the quantity of urine is small; and this is a strong presumptive proof that the disease is seated in the secreting organs, and not in the bladder: under such circumstances we can hope for no advantage by local applications to the inner surface of the bladder; it must be evident, our only advantage is by constitutional treatment, assisted by local applications over the region of the kidneys. In a case that he relates, Mr. Clay prescribed with the happiest effect:

Tincture of muriate of iron, Zj.; tincture of opium, Ziss.; infusion of Iceland moss, infusion of gentian, of each Ziv. Let an ounce be taken every four hours.

Mr. Clay adds:—Occasionally I have obtained relief from blisters and tartar emetic plaster over the region of the kidneys; but, except in recent cases, and of no great extent, I have not found them of permanent benefit; on the contrary, few cases have withstood the tinct. fer. mur. The number of cases I have seen relieved and cured by it, warrants the conclusion, that the disease is generally in the kidneys, and must therefore be attacked through the constitution.—Medico Chirurgical Review.

#### Burnt Rhubarb in Diarrhæa.

Mr. Hoblyn, of the Middlesex Hospital, informs us that-

It may be useful to the profession to know the value of burnt rhubarb in diarrhæa. I have used it for seven years, and found it more serviceable in the diarrhæa, attendant on the last stage of consumption, than the chalk-mixture and opium, or any other of the usual remedies.

I have known it used, with the same pleasing effects, for more than twenty years, in incidental diarrheas. After one or two doses, the pains quickly subside, and the bowels return to their natural state. The dose is from five to ten grains.

The manner of preparing it is to burn the rhubarb powder in an iron crucible, stirring it until it is blackened; then smother it in a covered jar.

It loses two-thirds of its weight by the incineration. It is nearly tasteless. In no one case where I have known it given has it failed. I have given it in portwine, milk, and water.—Medico Chirurgical Review.

# Mr. Donova's Improved Method of Preparing Vinum Ferri.\*

TAKE of the best hock one pint; common rust of iron of the shops, well levigated, two ounces. Introduce both into a matrass, which plunge into a water bath maintained at the temperature of 100°. Constantly agitate the matrass for an hour; then remove it from the water, and the next day filter. The color of this vinum ferri is a very deep greenish brown, almost black when the volume is great: its taste is ferruginous, agreeably and highly vinous; it produces a pleasant warmth in the stomach, and never sickens. In its effects it must be tonic, diuretic, emmenagogue, anthelmintic, and carminative. It does not, in a moderate dose, excite.

No other wine than hock will afford a preparation possessing these virtues. The dose for an adult may be three or four drachms thrice a day; in smaller doses it is of little use. If it is to be exhibited in combination with a bitter, it agrees well with colombo or gentian.

By this method, in one day, we obtain a far better preparation than is procurable by the processes of the pharmacopæias in two months. The iron exists in it, chiefly in the state of protoxide.

# MISCELLANEOUS.

Spontaneous Combustion of the Human Body.

THE following conclusions are drawn by M. Jacobs from the reports of twenty-eight cases related by different authors.

- 1. Spontaneous combustion occurs only in human beings, and never in the lower animals: and among the former only in the living and never in the dead body.
- 2. The majority of cases occurred in persons advanced in years; the youngest was twenty-nine years old, and there were other two fifty years old; all the rest were above the latter age.
- 3. By far the greater number of victims were women: of the twenty-eight cases, two only occurred in men.
- 4. In one case the catastrophe was preceded by a state of jaundice: and in another by the existence of an unhealthy ulcer on the head.
  - 5. All the persons were alone at the time of the accident.
  - 6. They had all led an inactive life.
- 7. They were all very fat and corpulent; with the exception of three of the women, who were thin, and of a dry habit.
  - 8. The majority, but not all, had been addicted to drinking spirituous liquors.
- 9. In most of the cases, there had been a candle, or fire, or some burning body close to the spot where the accident occurred.
- 10. Spontaneous combustion usually proceeds with great rapidity, as in from one to six or seven hours.
- 11. The flame proceeding from the body was not readily extinguished with water; it was very lambent and moveable, and destroyed only such articles as were quite close to, or in immediate contact with, the burning body.
- 12. The room, in which the combustion had taken place, was in most of the instances filled with a dense smoke, and the walls were covered with a carbonaceous substance; the floor, the bones, and the ashes were coated with an unctuous and highly-fetid matter.
- 13. The trunk of the body was generally quite destroyed; the remains being only some parts of the head and of the extremities.
- 14. All the cases of this singular occurrence, with the exception of two, have taken place when the weather was cold, and usually during winter, and in northern regions.—Casper's Wochenschrift.

On the Vascularity of Dental Bone. By Chapin A. Harris, M.D., D.D.S.

Although the doctrine of the nonvascularity of the teeth, as advanced by the celebrated English anatomist and physiologist, John Hunter, has been shown, over and over again, by facts which one would suppose none could doubt, to be erroneous, the existence of vessels in dental bone, has not hitherto, that the writer of this, is aware of, been actually demonstrated. By the aid of a microscope, he,

however, has been fortunate enough to discover vessels charged with red blood in the substance of human tooth-bone, in two instances. The first time he did it, was a little more than twelve months ago, and it was in a thin section which he had cut from a molar tooth of a very young person. In this a vessel was seen charged with red blood, and it was exhibited to several medical gentlemen, and to the class of the Baltimore College of Dental Surgery. This section of tooth is at this time in possession of the writer, and may be seen by any one, who may have the curiosity to examine it, by calling on him at his residence.

The second time he had the good fortune to make this discovery, it was in the half of an inferior molaris, taken from the mouth of a boy, eleven years of age, and of which, an exact representation of a microscopic view of it, is here annexed. The tooth had ached violently for several days previously to its extraction, and from which circumstance, he was induced to believe, that the vessels of the pulp were highly injected, and to satisfy himself upon the subject, he, soon after its removal, split it open with a strong pair of excising forceps. As was anticipated the vessels of the pulp were filled with red blood, and on examining the half of the tooth in which this had remained, through a microscope, a number of vessels within the very substance of the bone, charged with this fluid, were also distinctly seen.

It will be perceived by an examination of the annexed drawing that a considerable portion of the crown had decayed, and that it was not split exactly in the centre between the roots, but that the fracture had passed partly through one of the fangs.

The fractured surface, the decayed cavity in the crown of the tooth, the pulp and vessels within the bone charged with red blood are all so distinctly seen, that no other explanation is deemed necessary.—Amer. Jour. and Lib. of Den. Science.

The preceding article and accompanying plate, for which we are indebted to the polite Editor of the Baltimore Dental Journal, has induced us to subjoin the following case, illustrative of the vascularity and power of absorption enjoyed by the human teeth.

In November last, Miss H. received a blow on one of the upper incisions, that partially dislodged it from the socket. I found the tooth, about thirty minutes after the accident, protruding three lines beyond the dental arch. It was replaced and retained in its normal position by a fine wire, alternately twisted over the affected tooth, and its fellow on either side, somewhat in the form of the hair-lip suture. The unnatural whiteness of the displaced incision rendered more evident by contrast with the beauty and regularity of a superb set of teeth, induced me to believe that its vitality was destroyed, this fear was hardly diminished, when on the following day, I found the tooth excessively tender to the touch, and of a dark purplish hue, caused by extravasation from its ruptured vessels. On the third day a slight fading of the discoloration was noticed, and from that period, the gradual change of hue effected by absorption was daily more apparent. On the ninth day, the tooth being firm and barely discolored, I relieved the mouth of the irritation of the wire suture. On the thirteenth day the little member was evidently as firmly fixed, and as natural in color and appearance as if the accident had never occurred. D.





#### Death of Homeopathy in its Native Land.

"Ar the time of my former visit I was anxious to see the homeopathic hospital, of which I had previously heard, Leipsic being the head-quarters of this doctrine. I expected to have found at least forty or fifty beds filled with patients; but was rather surprised to find that the building (which is a small house in the suburbs) only contained eight, and even of these all but two or three were unoccupied. At my last visit to Leipsic I understood that matters were going on badly with homeopathy, which indeed is now comparatively little heard of in Germany and France, and only required to be understood by the public for its absurdity to be apparent, though there will always be credulous individuals who are to be caught by any novelty, when presented under a specious appearance, and backed by an unintelligible name. During its whole progress it never was sanctioned by any individual of eminence in the profession, and was principally taken up as a means of acquiring wealth or a livelihood by persons who had never been previously heard of, or who were known as having failed to acquire practice by the honorable exercise of their profession; by whom every means were taken to puff it into notice, and to keep public attention directed to it; such as repeated histories of cures, the establishment of dispensaries, of which, I believe, the only one that remains is the abovementioned at Leipsic, even if it be still in existence, for a few months before my arrival the house physician having become convinced, during a residence of some time in the dispensary, of the nullity and danger of homeopathy, gave up his appointment, and published an exposition of the system pursued, with an account of cases, which clearly shows-what had long been evident to the bulk of the profession and the public—that the so-called cures were recoveries from ordinary ailments by the efforts of nature, which were frequently a long time under treatment, whereas, by a proper medication and attention at the outset, they might probably have been removed in a few days, and that many of the more serious cases got worse instead of better, for the want of active treatment. It must not be supposed that the homeopathists always adhere to the principles of the doctrine. It has not unfrequently happened that persons who attributed their recovery to homeopathy were treated allopathically without their being aware of it. In fact, one practitioner in Leipsic, a professed homeopathist, candidly acknowledged that he pursued both plans of treatment, and was accustomed to ask his patients by which method they would be treated, as both were equally good."

We suspect that all homeopathists are not equally candid. The clever rogues prescribe allopathy, while they talk homeopathy. But the reign of any particular humbug (there is really no name so appropriate, albeit coarse) is short-lived—though the stock is so extensive that it is never worn out, and the market good enough to make it worth while to keep some article always upon sale.

We think our readers will agree with us that Mr. Lee's book contains a good deal both of amusement and of information.—Medico Chirurgical Review.

#### M. RACIBORSKI on the Physiology of Menstruation.

Our readers will remember that in our recent review of M. Gendrin's Traité Philosophique, we drew their attention to this curious and hitherto ill-understood, subject of physiological enquiry. From the researches of this gentleman, and from those of M. Negrier, as well as of Dr. Robert Lee, it was suggested that there is an actual rupture of one of the ovarian vesicles at each period of menstruation, and that the sanguineous discharge from the uterus was the result of this lesion. M. Raciborski questions the accuracy of this statement. While he admits that the primary movement in each act of menstruation is a congestion of the vessels of the ovaries, he denies that any rupture of their surface necessarily takes place at the same time.

"Having examined," says he, "in a great number of cases, the ovaries of women who had borne children, we feel assured that, as a general rule, the number of the cicatrices on the surface of the ovaries is always proportionate to the frequency of actual impregnation, whether it has been a genuine or only a false conception."

Some of the subsequent statements of M. Raciborski himself seem, however, to be at variance with this assertion, and partially to confirm the idea of frequent, if not of invariable, rupture during menstruation. Having quoted the opinion of M. Negrier, which is expressed in the following works: "An afflux of transparent fluid takes place into the cavity of one of the superficial vesicles of the ovary: this fluid, by its accumulation, depresses the yellow matter, distends and attenuates this last (the vesicle?) at the point which presents the least resistance; the ovarian envelopes are at length raised up, distended, and ruptured, with the vesicle," our author thus comments upon it.

"According to the distinguished professor of Angers, there must take place, once a month, in the female constitution, a phenomenon analogous to what we observe to occur in many birds. Women, like hens, must have the power of detaching ova from their ovaries without any previous fecundation. But, before we can admit so startling a proposition, we require to have more conclusive data than those hitherto made public. As to the statement that cicatrices with red edges, or small pouches filled with blood, have been found in the ovaries of women who had menstruated shortly before death, we may observe that on many occasions we have observed similar alterations in the bodies of women in whom the catamenia had been suppressed for several months, as is generally the case, for example, in those who die of phthisis."

- M. Raciborski sums up the conclusions to which he has come, after a very elaborate enquiry, in the following propositions:
- 1. That menstruation is in consequence of the accomplishment of the development of the ovaries.
- 2. That it is the direct result of the means employed by nature to place the ends of the Fallopian tubes and the ovaries in the relations necessary to fecundation and the passage of the fecundated ova.
- 3. That the sanguineous congestion, which is indispensable for obtaining those conditions in the human being, appears sufficient in itself to explain the occur-

rence of the hæmorrhage which constitutes menstruation—without having recourse to supposing that there is any necessary solution of continuity.

- 4. That the vertical position, favoring still more the effects of sanguineous congestion on the generative organs, may be one of the principal reasons of the abundance of the menstrual flux in women, and in some species of simiæ.
- 5. That, for want of having precise information as to the nature and theory of menstruation, it has been hitherto impossible to establish a rational treatment of the various disorders induced by irregularities of this function.
- 6. That it is not yet sufficiently proved that the ovula arrive successively to maturity at each menstrual epoch, or that the most mature ovum then approaches nearer the surface of the ovarium, there to become ruptured and give exit to a germ.—L'Experience.

#### BENJAMIN FRANKLIN'S Estimate of Animal Magnetism.

FRANKLIN thus writes to M. De La Condamine.

You desire my sentiments concerning the cures performed by Camus and Mesmer. I think, in general, maladies caused by obstructions, may be treated by electricity with advantage. As to the animal magnetism, so much talked of, I must doubt its existence till I can see or feel some effect of it. None of the cures said to be performed by it have fallen under my observation, and there being so many disorders which cure themselves, and such a disposition in mankind to deceive themselves and one another, on these occasions, and living long, has given me so frequent opportunities of seeing certain remedies cried up as curing every thing, and yet soon after totally laid aside as useless, I cannot but fear that the expectation of great advantage from this new method of treating diseases will prove a delusion. That delusion may, however, in some cases be of use while it lasts. There are in every great, rich city, a number of persons, who are never in health, because they are fond of medicines, and always taking them, whereby they derange the natural functions, and hurt their constitution. If these people can be persuaded to forbear these drugs, in expectation of being cured by only the physician's finger, or an iron rod pointing at them, they may possibly find good effects, though they may mistake the cause.\*

I have the honor to be, &c.

Dublin Med. Press, July 21, 1841.

B. FRANKLIN.

\*In writing to Dr. Ingenhousz, some time afterwards on this subject, Dr. Franklin said, "Mesmer is still here and has still some adherents and some practice. It is surprising how much credulity still subsists in the world. I suppose all the physicians in France put together, have not made so much money, during the time he has been here, as he alone has done. And we have now a fresh folly. A magnetiser pretends, that he can, by establishing what is called a rapport between any person and a somnambule, put it in the power of that person to direct the actions of the somnambule, by a simple strong volition only, without speaking or making any signs; and many people daily flock to see this strange operation."—Sparks' Life of Franklin.

## OBITUARY NOTICES.

It is with deep regret we announce the death of Dr. George S. Sproston, one of the oldest Surgeons in the United States Navy. Dr. S. had been for a considerable time in a very precarious state of health, and calmly and resignedly closed his life in this city on the evening of Friday, the 28th January, leaving an interesting family to bemoan the sad and afflicting bereavement. In his death the service has lost one of its brightest ornaments, and society, a most estimable member. Dr. S. was an educated and accomplished gentleman, pure minded and honorable in all the relations of life. We insert with pleasure the following tribute to his memory, from one who knew him well.

"In the lamented death of George S. Sproston, M.D. who recently died on the Baltimore station, the United States Navy has lost one of its senior Surgeons, and one of its best, and most intelligent men. He entered the service as an Assistant-Surgeon in 1813, promoted in 1818, graduated as a doctor of medicine at Harvard, cruised in very many of our public vessels, and in almost every climate; but whether we view him as an assistant-surgeon, fleet-surgeon, or as a member of a naval medical board, he was ever found intelligent in the highest degree, ever attentive to the arduous duties required of him, and one of the most conscientious of surgeons, as every officer and seaman that ever knew him, or came under his kind care, can testify. The Navy will long deplore the loss of their valued friend, messmate, and shipmate. He is taken from them, and those dear ones, in whose sad bereavement, all cannot but sympathize, but let them not mourn, as their loss is his eternal gain."

W.

DIED—On the 9th inst., at his late residence in Anne-Arundel county, Md. Dr. Gustavus McElhiney, in the 46th year of his age.

DIED-At Centreville, Maryland, on the 4th March, Dr. George W. Thomas.

## MARYLAND

## Medical and Surgical Iournal.

APRIL, 1842.

#### MONOGRAPH ON THE YELLOW FEVER.

BY ISAAC HULSE, M.D. UNITED STATES NAVY.\*

THE numerous treatises which have been given to the world on the yellow fever, might lead many to suppose that any further attempt to throw light upon it would be a work of supererogation; but no work has yet appeared, in which the author has shown himself capable of tracing the remote and proximate causes of this destructive malady, or of laying down a successful mode of treatment for it in all its phases.

I cannot presume to be prepared to supply these desiderata, but such remarks as have been suggested by the experience I have had in several epidemics of this disease, are now with great diffidence submitted.

This is admitted to be a disease of hot climates and an alluvial soil—it does not exist in the mountainous districts of the West Indies and of tropical America, but it is epidemic in the low parts, in the vicinity of æstuaries and marshes. It is also

<sup>\*</sup>The author acknowledges himself indebted to Dr. Copeland, for some of the physiological illustrations contained in this treatise.

epidemic, in some of the southern states upon an alluvial soil, and particularly at the debouchement of rivers. Nor is it usually epidemic in these localities, except after a summer of excessive heat and drought—during seasons where there is an abundance of rain throughout, the disease does not, as far as I can understand, make its appearance. Hence it has been inferred by most writers that it originates in those effluvia which arise from dead animal and vegetable matter, and the inference appears to be pretty well supported.

During the past season, the atmospheric temperature at this point has been unusually high and long continued, yet an immunity from the disease was hoped for at Pensacola, from the copious rains that fell in the early part of summer, inasmuch as it has never been known to appear here during a wet season. However, the months of August and September proved to be excessively dry, yet it was not till the latter part of September that some cases appeared in that city, chiefly among persons not acclimated.

At Mobile the disease did not appear, at least, not as an epidemic, and the question naturally arises why that city lying so near to us should have been exempt, and yet having in its vicinity the elements usually so fruitful in producing it. I have attempted to answer the question by assuming, that early in the summer the rains were so abundant as to swell the rivers, having their delta opposite Mobile, to such a degree as to keep the marshes supplied with living water, and the course of those rivers is so long that these sources were not exhausted till the occurrence of the timely rains in October.

The course of the Escambia, on the contrary, is short, and its supplies failed upon its extensive delta before the hot season had passed. (The delta of the Escambia is about ten miles from Pensacola, and about sixteen from the Navy-yard.)

On board the Levant, sloop of war, we have numerous facts to prove that there existed a cause additional to that in the atmosphere, in the foul state of the hold of the ship. This ship was lying opposite to Pensacola during the month of August, and on the last day of that month four cases of yellow fever were

sent from her to the hospital. In three or four days she dropped down to the Navy-yard, was dismantled and her crew were sent on shore at the yard, a portion of them, still communicating with her, and on the last day of September ninety-nine cases of the yellow fever had been admitted at the hospital from her officers and crew. New cases continued to occur among the ship's company, now located at the Navy-yard, until we received thirty-nine more cases, making in all one hundred and thirty-eight cases from that single ship. The disease did not disappear till the 5th of November, after several severe frosts.

During the whole of this time not more than one or two well attested cases occurred, having their origin at the Navy-yard, among all the officers, seamen, marines, mechanics and laborers connected with that establishment. Not one case occurred among the officers and attendants of this hospital, which is located on a bluff, one mile west from the Navy-yard, and about a mile and a half from the sea.

Several instances occurred in which persons who had been cured of the disease, returned and exposed themselves again to the infection on board, and had a fresh attack, possessing all the characteristics of the first; in general, these second attacks were more severe than the first, and in one, it was fatal. In addition to these cases of second attack, John Tinges, a boatswain's mate was the subject of a severe attack of this disease this year; he had had the yellow fever at Pensacola in 1822, while attached to General Jackson's army.

The French vessels of war La Sabine and Le Dunois, after having fourteen cases, five of which proved fatal, dropped down to the Navy-yard, and on the 26th of September commenced sending their patients to this hospital as soon as practicable after the attack. After their arrival here, they had eighteen cases, two only of which proved fatal. The disease ceased on board on the 7th of October, and on the 12th they re-embarked all their convalescents, and sailed a few days after for Havana. In the case of these vessels the disappearance of the disease must be attributed to their change of position to a healthy atmos-

phere. The Levant had twenty-one new cases after the disease ceased on board the French vessels.

The attack is usually ushered in with pains in the limbs, head and back, chilly sensations, alternate chills and flushes, nausea, vomiting; in a short time, the pain becomes intense in the head, across the eyes, in the back and extremities, frequently attended with cramps in the legs, almost always with redness of the eyes, pulse much accelerated, not always full and strong, sometimes tense—difficult respiration, and the whole frame seems writhing under excruciating agony. Usually, but not invariably, there is great thirst, tongue dry, with redness at the tip—sometimes the redness extends to the sides, and sometimes covers it entirely. Sometimes the attack is so sudden that in an instant the subject of it passes from apparent health to the agony of all the above described symptoms, and in a few cases he falls in a fit where the convulsion is general.

The ingesta vomited are usually undigested, and the stools are of a dark brown color or black. Frequently there is pain in the chest, under the sternum, also in the stomach, in the region of the liver, of the kidneys and in the abdomen. The secretions become scanty, in some instances they are nearly or quite suspended.

During the late epidemic here, the redness of the eyes and cramps of the legs were almost universally concomitants, and there was force enough in the pulse to admit of venesection to a moderate extent. In some epidemics, however, the symptoms will vary, and the depressed vitality of the organic nerves will be such as to enable them only to carry on a languid circulation. On these occasions venesection is injurious, and often hastens a fatal termination. Such was the character of the epidemic at Pensacola in 1839, when in private practice, I treated one hundred and forty-six cases almost invariably without bloodletting, with a loss of only six. Such was also the character of the disease which I met with on the west coast of Africa in the United States schooner Grampus, in 1823. The disease usually runs its course in four or five days without any positive remission of the fever. But under proper treatment many cases will

be cut short in twenty-four or forty-eight hours, and the patient 'will convalesce rapidly. As the disease continues, local determinations, or perhaps more properly speaking, congestions take place in the cerebrum, but more frequently in the cerebellum, in the lungs, liver, stomach and intestines; these are usually announced to the physician in time for him to combat them.

As the fever continues, the thirst becomes insatiable, the patient demands cold drinks, at the same time the intolerance of the stomach precludes the possibility of his indulging in them, except very sparingly. The pulse becomes more feeble, but still increased in frequency, the skin hot and dry, the conjunctiva assumes a yellowish tinge, the skin also, in some cases, as early as the second or third day begins to turn yellow. The stools are liquid, dark colored, and offensive. In the worst cases, about the third day, hiccups come on, the countenance has a wild expression, the skin assumes a tawny hue, the lips blue, black sordes collect in the mouth, the tongue is dry, rough and covered with a dark brown coat, the breath is offensive; the patient sometimes says he is well, insists on getting up, and calls for some hearty dish to eat; these cases prove fatal very speedily. In others a copious sweat breaks out and the patient says he feels well; the vital powers sink, the sweat becomes cold, and is the sweat of death. The sweat, however, in many instances results in a solution of the disease, and the patient returns rapidly to health. In others which prove fatal, the matter vomited has at first, dark colored floculi mixed in a slimy looking liquid, these floculi gradually mingle with the liquid, and finally the vomit consists of a dark colored thin fluid, having dirty treacle-like matter in it, which is ejected, sometimes in small, sometimes in incredibly large quantities just before death.

In this disease there is great tendency to hæmorrhage. The orifices where venesection was performed reopen, and thin, light colored blood, scarcely coagulable, escapes. Hæmorrhages also frequently take place from the nose and mouth, and in some few cases from the intestines; and I have seen two cases in which the conjunctiva became fully injected with red blood. Sometimes diarrhæa supervenes which no remedy will arrest, and it quickly

puts a period to all suffering. Occasionally, the fatal moment takes place in a convulsive fit. Towards the closing scene the saliva becomes thick, and is easily disengaged and ejected to a distance, and the patient seems as if amusing himself spitting against the wall. In some instances the vision is so limited that the patient cannot see objects unless they are placed very near to him: this has in my experience, been always a fatal symptom. Delirium generally accompanies the last stage, although in some, there are many and long lucid intervals, in some there is no apparent aberration of the mind till the agony of death overpowers the senses.

Post-mortem appearances.—Head. The arachnoid is frequently injected with thin, black blood. The cortical substance shows bloody points when cut into. The choroid plexus is generally injected with similar looking blood to that found in the vessels of arachnoid. The vessels of the cerebellum are injected in every direction with black grumous, treacle-like blood.

Thorax. The lungs have dark colored patches on their surface, and contain dark colored blood, some of which appear decomposed.

Abdomen. The liver is pale, though sometimes it has livid patches; when cut into, black, dirty looking blood, highly fluid, gushes out in large quantities.

The stomach frequently contains a small quantity of dark colored decomposed matter, in appearance not unlike the matter of the black-vomit, and the fluid contained in some of its bloodvessels. It is generally contracted to a small size, and its coats are corrugated; its large vessels are filled with black decomposed blood. In some places its villous coat is dark colored; in some, patches of a rose color are also seen. The pancreas is diminished in size. In the smaller and large intestines and mesentery, the large vessels are seen distended with dark grumous blood, and the peritoneal coat of the intestines exhibits here and there, dark colored patches, while in the mucous coat we occasionally find the same intermingled with rose-colored spots. The contents of the intestines are black, and if the patient has been duly evacuated early in the disease, they are of little consistency.

Were I called to answer the question, what symptoms are the most constant? the reply would be, in this last epidemic, redness of the eyes, pain in the head, back and extremities, excessive pain in the knees, cramps in the legs, nausea and vomiting.

In one instance on board the Erie, near St. Domingo, in 1831, a man was taken with cramp (in this disease) while aloft shortly after eating a hearty dinner; he was brought down by four of his comrades, laid on the berth deck, and no pulse could be discovered. By the aid of stimulating frictions, re-action took place sufficiently to allow the use of the lancet, and the patient recovered.

The blood when drawn from a vein is thin and watery, is said by Dr. Stevens, whose authority is highly respectable, to contain little or no saline matter, and if unfortunately it is drawn in the latter stage of the disease, (as I have seen it in one instance) it is dark colored, decomposed, has a cadaverous smell, and has lost the property of coagulating.

How is a physician to distinguish this disease on its first appearance, from the high grade of bilious or congestive fever? Answer, by the season of the year, the locality, the suddenness of the attack, the great mental and bodily distress, and by the fluid and difficult coagulable state of the blood. Perhaps the appearance of the eyes and tongue, the anxious expression of the countenance, and the pains in the back, and cramps of the legs, may for the most part be added. At all events, if the distinctive marks cannot be described, they are readily discovered by a physician who is experienced in yellow fever.

M. Louis declares that the pale orange color of the liver is the characteristic in the diagnosis of yellow fever. As far as my experience goes, the pale color of the liver, or a greater portion of it, is invariable, and I will add, when cut into there is a rush of fluid, decomposed dark colored blood. This I have witnessed as late as twelve hours after death.

The inductions of cure are, first, to allay vascular excitement; second, to counteract the poison of malaria; third, to relieve conjections, and fourth, to correct the attenuated state of the blood.

First, the patient should be removed, if possible, to a pure atmosphere.

The first indication is answered by bloodletting in a recumbent posture at the time of reaction. In the recumbent position he will bear a greater loss of blood than in any other. Immediately after bloodletting the stomach will retain Di. of calomel, which will answer part of the second indication, and if followed by ol. ricini 3 j. in two hours, it will in nine cases out of ten operate speedily and freely on the bowels, and thus do much towards both the first and second. Should it fail to operate in five or six hours, common injections, composed of ol. olivar, common salt and warm water should be administered, and repeated every hour till fœcal discharges are produced. If it is asked, will castor oil be retained? I answer, it will almost invariably after bloodletting and calomel, given in a little brandy or spts. lavend. If it be ejected it must be repeated immediately. A mustard poultice to the stomach will frequently allay the irritability and cause medicine to be retained. Great stress is to be laid on the early evacuation of the bowels.

Bloodletting should never be persevered in after an impression is made on the pulse. Sincope is not desirable, indeed I think it generally hurtful. The reaction in such a case is either so strong as to cause many of the symptoms to return with great pain to the individual, or it fails altogether to take place, and the patient gradually succumbs. If after the bowels are evacuated the arterial action appears strong within the first twenty-four hours, venesection may again be resorted to, but cautiously. After the first twenty-four hours it is rarely required, and after forty-eight hours it should, in my opinion, never be practised. I have never had the good fortune to see a patient recover who was bled on the third day.

Local congestions are to be met, with cups as near the part as practicable, and these during the first and second, and even third days, will instantly remove the pain and allay arterial excitement. The patient will bear the loss of more blood taken in this way than he will taken from the arm; in the old way, with tumblers, six or eight ounces may be taken in fifteen or twenty minutes.

1842.7

399

With a view to the fourth indication, the best drink I have been able to devise has been sugar and water, slightly acidulated with pure, crystallized citric acid, with ice, if preferred; and the best article of nutriment, arrow root.

On the second day, a mixture may be given, composed of camphor, gr. ss. to gr. j. and potassæ nitrat. gr. iij. to gr. v. every second or third hour. Ice may be held in the mouth where there is great internal heat and thirst; if vomiting is urgent, bi-carbonat. of soda and tartaric acid in the effervescing state, allowing a slight excess of the acid, but not over two tablespoonsful should be allowed at a time. With this intention also, the sulphat. of morphine is occasionally given with happy effect. If cephalalgia be intense, in addition to cups to nuchæ, ice may be applied in a bladder to the head, but the patient will rarely find this agreeable where the cups have been freely applied. A blister may with propriety succeed the cups.

After the general excitement is allayed, if the irritability of the stomach continues, and pain exists in the epigastric region, a blister may be applied; previous to this however, sinapisms may be used freely to pained parts, and the limbs may be rubbed with tinct. capsici or other stimulating articles.

On the appearance of the black vomit, or even before, where it is suspected, ol. terebinth. in doses of thirty to forty drops, every hour, or second hour, may be administered to great advantage. I have seen it stop the black vomit, but have not seen the patient recover where this symptom has been fully declared. Where the vomit has been simply a dark fluid, with dark floculi, I have seen patients recover, but not after the whole matter has become a decomposed mass having no distinct floculi.

As soon as yellow bile is seen in the stools it may for the most part be decided that the disease has run its course, and the patient is only in a state of exhaustion; he must then be supported with light animal broth, generous drinks, and by such a course as will be suggested to every intelligent physician. During the febrile stage, the bowels must be opened at least twice a day, and care must be taken that hypercatharsis be not induced; this runs sometimes into diarrhæa, which carries off the patient.

In short, all the symptoms must be attentively watched, and the medical attendant must be present to meet any untoward event, and commence aiding the restorative powers as soon as they are manifested; much depends on the exhibition of every remedy at the proper moment. There is ordinarily great despondency, and the patient's courage must be supported.

In some cases I have given calomel, gr. v. and p. rhei gr. xv. on the second or third day, but rarely; and in some few cases I have on the second repeated the scruple of calomel, followed by castor oil. In general I have not used this metal as an alterative, and have relied on its powers as an antidote, cathartic and deobstruent, by passing it thus rapidly through the alimentary canal. During this epidemic I have had no instances of suppuration of the salivary glands, and not one of salivation.

The cases published by Dr. Barrington, in the American Journal of Medical Science, in 1833, will convince any one who has not been convinced before, that to attempt to salivate in yellow fever is a most destructive practice; in the adynamic state the powers of life become more and more exhausted under each successive dose, salivation cannot be effected, and the patient sinks under its exhibition. In states where the congestions are not of a grave character, and where the vitality is sufficient to admit of its specific effects being shown upon the salivary glands, the patient will generally recover under its use as a cathartic, when not more than one dose is given in twenty-four hours, aided by other judicious means. In other words, where it is possible to effect salivation, the disease can be cured without it. These cases, treated with v. s. and calomel alone, furnish means of much instruction, as they stand recorded on the journals of this hospital by the hand of Dr. Barrington himself, who was the assistant here during an epidemic in 1830.

Of the value of quinine in this disease I cannot bear certain testimony, although I have occasionally tried it in one grain doses; I have derived greater advantage from wine-sangaree, brandy-toddy, wine-whey and egg-nog. The surgeons of the French army, it is said, have treated the disease very successfully in Algeria by administering twenty grains of quinine at the com-

mencement. It is probable this practice may be successful in the adynamic character of the disease in that climate, and we understand that during the epidemic in New Orleans, in 1839, when the disease was of a type not to admit of bloodletting, a similar practice was pursued by some physicians with good success.

Finally, it may be stated in recapitulation, that in the treatment my chief reliance is upon bloodletting, judiciously and early practised, calomel in a single dose of a scruple, followed by castor oil in two hours, cups when congestions form, to the nuchæ, epigestrium and spine, common enemas to aid the operation of the cathartic and keep the bowels gently open, stimulating frictions and sinapisms in the early stage, and blisters in the second; acidulated drinks, cold or temperate, and the camph. nitrous potion during the continuance of fever, also the occasional use of the terebinthinates. Opinions are divided as to the nature of the black vomit. I feel convinced that it consists of the blood in a decomposed state. It is not difficult to arrive at this conclusion when we have seen the blood drawn from the arm in different stages of decomposition, when we have seen after death that the great veins of the stomach and intestines are turgid with fluid grumous blood, resembling the black vomit so closely as hardly to be distinguished from it, and when we have seen patients retching and vomiting incessantly during the whole course of the disease, discharging every drop of fluid from the stomach almost instantly on receiving it, although it be admitted in quantities of only a teaspoonful at a time, until near the fatal period when suddenly they have deluged the bed with the black vomit and instantly expired.

In these cases the exhalent vessels of the stomach are supposed to have lost their vitality, they are in a passive state; the blood, decomposed and highly fluid, makes its way through them, and is poured into the stomach.

To elucidate the manner in which poisonous effluvia act upon the system to cause yellow fever, it will be necessary to take a cursory view of the character of the blood in the healthy state, and its alterations in disease.

The blood in the healthy state is a living fluid, and its life is sustained by ganglial or organic nerves which are ramified most minutely upon the internal surface of the vessels. The red globules are suspended in the serum by means of the vital influence which is communicated to the blood by the vessels and the structures through which it circulates. According to the physiologists, these globules possess a rotary motion independently of the motion arising from the pulsations of the heart. There is a force exerted on them by which they are kept at a distance from each other, and this force is supposed to be derived from the ganglial nerves of the vessels. There is also another force exerted in the organic structures which tends to bring them to a state of repose at the point where the fluids and solids come in contact. See Andral, Schultz and Copland. All the appearance of vitality therefore appreciable by the microscope in the blood, while in the vessels, is lost when this fluid comes within the influence of the vitality of the different tissues; each one attracting from it those constituents required for its own development and function.

When the blood is removed from the body, the vital action which retains the red substance round the white corpuscles ceases, the globule breaks and the red particles separate and form the coagulum.

Alterations of the blood in disease. The coloring matter undergoes changes in febrile and malignant diseases. The watery part of the blood varies remarkably in diseases; this is seen in cholera, dysentery, and others attended with watery evacuations.

The fibrine is deficient; we have seen it so nearly wanting as not to admit of any coagulum being formed.

The saltish taste of healthy blood, according to Dr. Stevens, disappears in malignant fever, and according to others, in several pestilential diseases.

The blood varies under peculiar regimen; thus it was observed when the scurvy broke out in the fleet of Lord Anson; early in the disease the blood was marked with red vermilion streaks; after standing some time it was dissolved and assumed a dark color, and did not coagulate. At the third stage of the disease the blood was black as ink.

Dr. Magendie relates a case of a man who, having long subsisted upon vegetables in which the oxalates abound, was operated on for the stone, and a large calculus was removed from him consisting of oxalate of lime.

The imperfect performance of those functions concerned in depuration causes alteration of the blood; when by irregular action in the lungs they fail to remove carbonaceous matter, when the skin fails to form a due amount of perspiration, or the liver, or kidneys to maintain healthy secretions, by their not taking from this fluid those substances necessary to be eliminated, alterations must take place in its properties, in its relative proportions and even its vitality.

It has been seen that at high ranges of temperature when the air was charged with miasmata, a torpor has been manifested in the liver, and bile has accumulated in the blood to such an extent as to give to the countenance a dusky hue.

M. M. Gaspard and Magendie have given experiments by which they exhibited striking morbid changes in the blood by introducing putrid animal and vegetable matter into the cellular tissues, and into the vessels. The presence of these substances produced symptoms very similar to those of yellow fever. After death the blood was almost entirely fluid, of a very dark color, and in some instances exuding from the capillaries.

The experiments of Fontana with the poison of the viper and ticunas show, that when these substances were applied to the cerebro-spinal nerves, no more effect was produced upon them than upon any other tissue, but when injected into the veins, death was almost instantaneous. Here the phenomena are supposed to be attributable to the impression being first made upon the organic nerves, by which it was communicated instantaneously through the whole frame. This result shows how much more readily deleterious impressions are conveyed through the organic than through the cerebro-spinal nerves.

Andral and Copland think they have demonstrated that the ganglial nerves exert an influence upon the blood, and vice versa. Dupuytren has shown that a division of the pneumo-gastric nerve prevents the venous from being converted into arterial blood in

the lungs; more recent experiments show that a division of both pneumo-gastric nerves causes the blood to coagulate in all the pulmonary vessels.

In some diseases, as the exanthemata, there is often twice as much albumen in the blood as in the healthy state; in these cases the blood is exceedingly viscid to the touch. Copland—In others it is thin and running readily into decomposition, containing but little albumen and difficultly coagulable; such are adynamic and pestilential diseases, and that under consideration.

Blood recently drawn, or while it flows, may be prevented from coagulating and rendered fluid, and if a more florid color, by adding to it the neutral and alkaline salts. By injecting into the veins acids, or the metallic salts, especially those having an excess of acid, the blood assumes a dark color, and there is a partial coagulation, and when these substances are added to the blood taken from a vein, they quicken its coagulation. The internal use of the fixed and volatile alkalies and their sub-carbonates attenuate the blood and the opposite effects are observed after the exhibition of acids, tonic and astringent tinctures, and spirits turpentine, the balsams, alcohol and tinct opii. These facts are established by numerous experimenters, beginning as early as the days of Friend, and coming down to Scudamore.

This array of materials for argument may seem to savor of the humoral pathology, be it so; the opinions now advanced are such as were maintained by me in an inaugural prize thesis entitled "de medicamentorum operationibus," and deposited in the University of Maryland, in 1823, and they obtain favor with the best writers of the present day. It is in accordance with them that I attempt to explain the action of exhalations from putrid vegetable and animal effluvia upon the human system. In the lungs these effluvia are applied to the blood, first disturbing its vitality and altering its properties consecutively, they act upon the ganglial nerves of the vessels. Through these nerves a morbid impression is communicated to all the organs. This system of nerves then becomes the subject of a double action, first, of the blood in a morbid state; second, of the poison itself. The secreting organs are now all disturbed, and when the cause is

intense, their functions are entirely suspended, and death speedily ensues. Under ordinary circumstances, however, the vitality of the organic nerves is only depressed, reaction comes on, inflammation is the consequence. The depurative organs, besides being disturbed in their vitality, no longer meet in the blood those substances necessary to form a normal secretion; congestions take place in them, and we have the phenomena of the first stage of fever.

Is the yellow fever a distinct disease, or is it nothing more than a high grade of bilious fever? Answer, it is a distinct disease and produced by a cause sui generis. High bilious fever is, I believe, always of high vascular action, requires the lancet, and the blood drawn is buffy and viscid. Yellow fever is occasionally throughout the period of an epidemic of a low type, and bloodletting proves fatal; this is the case, perhaps, when the poison is highly concentrated, and causes the vital energies to sink under its first action, or in individuals where the organic nerves are highly susceptible.

- 2d. High bilious fevers occur every where on a rich soil, and on the margin of rivers. Yellow fever rarely appears far from the sea, and most frequently where there is a mixture of salt and fresh water.
- 3d. Yellow fever almost invariably runs its course in four or five days. Bilious fever has remissions, and has not, as I am aware, any certain period.
- 4th. The state of the blood in yellow fever is remarkably fluid, is liable to escape through the exhalent vessels, and thus a tendency to decomposition.
- 5th. In the last stage of yellow fever the blood is decomposed in the vessels, and this is sometimes attended with the black vomit.
- 6th. On dissection the surface of the liver is found of a pale orange color, while it is distended with black fluid blood.
  - 7th. The dead body runs rapidly into putrefaction.

In this epidemic the number of cases admitted at the hospital were,

mericans,		10	Cases. 138	Deaths.
of whom there w	ere de	aths,		11
rench, -	-	-	18	
	dea	aths,		2
Total,	-	-	156	13
Of the deaths,	2	occurred	in three	days.
	4	66	four	66
	3	"	five	66
	4	"	seven	66
	13			

U. S. NAVAL HOSPITAL, PENSACOLA, 1st January, 1842.

### SCRAPS,

#### MEDICAL AND PHARMACEUTICAL.

BY JAMES HAMILTON, M.D. BALTIMORE.

In the revision of the majority of the few journals intended to be devoted particularly or partially to pharmacy, it can with truth be affirmed, that much of the information conveyed with a view of aiding and enlightening both physician and pharmaceutist, is by no means calculated to be of material benefit to either. The truth of this has been for some time past so evident, as to render many of the subscribers to such periodicals, to consider it almost loss of time to attempt even by a careful perusal to glean any thing practical from the chaotic mass in which (if it exist) it is generally involved.

A plausible excuse for this may be alleged to arise from the idea which it would seem is prevalent among the contributors to such periodicals, that it is their first and most imperative duty to describe, translate or copy all the most recent facts established; in minute chemistry, if the term may be allowed—or the particulars and attributes of some newly discovered compound or proximate principle, of which there is as much detail as if their properties had been fully tested and confirmed by the experience of This information is undoubtedly very proper in its proper place and under certain restrictions, that is not to the exclusion of more valuable and suitable knowledge, but when it is observed how few of these new proximate principles are ever introduced into actual use, and if so, the brief time they continue, that often after having been emblazoned with due importance attached to them, many are ascertained to be only optical delusions of these discoveries, or if even experimented with in Europe, and introduced as a component of the physician's prescription, the reverse may occur in this country, when again the improvement of which pharmacy is susceptible, is taken into consideration, wherein substances in every-day use may be improved in preparation and mode of administration, every thinking and candid mind will admit that a reform in this respect is absolutely necessary—the substitution of useful intelligence for that which is not only useless expense and waste of material, but of no benefit to those for whom it was intended, and certainly of little credit to them to affix their names as authors.

Were pharmacy in this country in the high state of improvement in which it exists in France, the same restrictions placed upon those who dispense medicines, and the same acquirements exacted, if every apothecary were indeed as he states himself to be, "a chemist," all these important articles to which allusion has been made, might he deemed interesting though unprofitable; but as things actually are, in the infantile condition in which pharmacy exists here, it would seem as if an attempt had been made to deck the pages of our journals with every thing that is unsuitable, intricate and uninstructive. The consequence of such a measure can easily be anticipated;—those for whose instruction, these journals have been established, will soon become satiated with reading that which they cannot comprehend, and thus will cease to patronize them; the physician also who may occasionally resort to their pages in the hopes of increasing his knowledge of some particular article, will turn from its chemical minutiæ with a consciousness of his inability to solve the mystery, and thus a medium through which an endless fund of information and improvement might be regularly transmitted, will be destined to pass away among the multitude of medical periodicals that might still have survived and flourished, had it been the constant view of their editors and contributors to have furnished the medical community with useful practical intelligence.

If such difficulties then are presented to the pharmaceutist, or even the apothecary and druggist in making a useful application of the contents of such journals, the *student* of pharmacy has much less chance to profit by its inspection, and a work which should be thus fitted and suited for him, is rendered useless to a large portion of those for whom it is pretendedly published. This condition of things has been long since noticed, and more particularly, inasmuch as connected with all journals of this kind,

there appear names of those who neither lack talent nor industry to take any measures for the advancement of works, in the success of which they may be interested. The ideas which have been thus roughly sketched, are not intended as if originating with the writer; they, on the contrary, have been remarked by others;—may they meet the eye of the editors of the journals.

#### IODIDES OF MECURY.

Correct processes for the preparation of these compounds, now successfully introduced in the practice of medicine, have not as yet, it is believed, been made known to the pharmaceutist; or if so, the relative proportions of the ingredients have been apparently recorded without due consideration and care, so as to cause decomposition and the union of the respective agents in their proper atomic proportion. True, it may be said that this is not absolutely requisite, that these compounds may be formed without any particular attention to this; but on the contrary, unless they are combined in their respective proportions, an unnecessary waste of some material will ensue, which, whether it be expensive or not, would indicate improper action on the part of the preparer, and should therefore always be avoided. In the following notices care has been taken only to state the proper proportions in which their components should be combined.

#### PROTO IODIDE.

In the process for obtaining this substance, as adopted by M. Henry, translated by Mr. Ellis, in the American Journal of Pharmacy, vol. i, page 204, (the only one which has fallen under our notice) 100 parts of proto-nitrate of mercury are added to 45.3 of iodide of potassium—when stated properly, its inaccuracy will be at once perceptible.

PROPORTIONS.	COMPOSITION.	PLAY OF AFFINITY.	PRODUCTS.
Prot. Nit. of Mercury {	Mercury79.500.	Potassium10.738	Nitrate of Potassa
	Nitric Acid20.499.	Nitric Acid14.855=	25.593.
Iodide of Potassium { 45.3.	Potassium10.738.	Mercury 57.601	Prot-Iodide of Mercury
	Iodine34.642.	Iodine 34.642=	92,243.

In this process the relative quantity of the iodide of potassium is much too small, and the product by M. Henry is said to be 80.3, when by calculation it is 92.2. When corrected as below and compared, the difference will be then more perceptible.

PROPORTIONS.	COMPOSITION.	PLAY OF AFFINITY	PRODUCTS.
Prot. Nit. Mercury {	Mercury79.500. Nitric Acid20.499.	Potassium14.820 Nitric Acid20.499	Nitrate of Potassa 35.319.
Iodide of Potassium { 62.6.	Potassium 14.820. Iodine47.812.	Iodine 47.812 Mercury79.500	Prot-Iodide of Mercury 127,312,

#### BIN IODIDE.

In the process for obtaining it, given by Edwards and Vavasseur (translated by Togno and Durand, 1829,) 100 parts of the iodide of potassium are combined with 70 of bi-chloride of mercury, the action of which is as follows.

PROPORTIONS.	COMPOSITION.	PLAY OF AFFINITY	PRODUCTS.
Iodide of Potassium {	Potassium23.662. Iodine76.337.	Potassium20.087 Chlorine18.174	Chlorate of Potassa 38.261.
Bi-Chloride of Mer- { cury. 70.	Mercury51.825. Chlorine18.174.	Mercury 51.825 Iodine 64.806	Bin Iodide of Mercury 116.631.

Here the relative quantity of bi-chloride of mercury is too small, and consequently a considerable portion of the iodide of potassium remains undecomposed.

In the formula given by M. Henry, (American Journal of Pharmacy, page 205,) the 100 parts of the iodide are correctly combined with 83 of the bi-chloride, but the product is represented as only amounting to 63 parts, whereas it is 137.7 more than double the amount, as may be seen by the following schedule:

PROPORTIONS.	COMPOSITION.	PLAY OF AFFINITY	PRODUCTS.
Iodide of Potassium {	Iodine76.337. Potassium23.662.	Potassium23.662 Chlorine21.550	Chloride of Potassium 45.213.
Bi-Chloride of Mer-	Mercury 61.449. Chlorine21.550.	Mercury 61.449 Iodine 76.337	Bin lodide of Mercury 137.787.

The preparation of this iodide requires more particular attention than the former, from the active properties of one of the articles (bi-chloride of mercury) used in its formation; it follows as a matter of course that unless the whole amount of this substance be decomposed, it will be mechanically combined with the bin-iodide that may be formed, and unless after precipitation repeated washings with distilled water be resorted to, it will necessarily impart a double activity to the bin-iodide. This is the only means by which we can satisfactorily explain the varied action of the different specimens of this valuable medical agent. Occasionally it will induce profuse ptyalism promptly, and again its effects will be comparatively slight, and even after using it for some time; - when pure, it has no tendency to excite profuse ptyalism even after its continued use, and administered in comparatively large doses-nor can this be owing to any idiosyncracy of constitution, inasmuch as when given at different periods to the same individual, increased or diminished effects will be experienced from the use of it, prepared at different places. This discrepancy can only be explained on the supposition that it is caused by the occasional presence of the bi-chloride of mercury.

#### HYDRARGYRUM CUM CRETA.

This medical preparation has fallen into partial disuse by the physician for some time past, in consequence of not fulfilling the indications in which it is often prescribed. It had been frequently observed that, when administered in the diseases of children, in which, from its nature, or perhaps from former use, it was deemed particularly applicable, instead of producing the effect of a mild antacid and alterative, violent continued emesis has been the result to the risk of the patient and the confusion of the physician. Occasionally another variety of it would have the most delightful effect, and unaccompanied by any emetic property, but in consequence of the risk incurred in producing violent action in very young children, and the comparative uncertainty of its operation, this invaluable preparation now is seldom prescribed, and in lieu of it the pil-hydrargyri with carb. calcis. generally substituted. Of the merit of the latter combination it is not proposed to say aught, but simply to state facts as they

have occurred in relation to the hydrargyrum cum cretâ in numerous instances.

Having been alarmed frequently by the repeated emesis consequent on the administration of this substance, it occurred to me to examine it for the purpose of ascertaining the existence of any impurities; all the specimens bore the stamp of a celebrated London house, were smooth to the eye and touch, and on examination with a lenz, no metallic globules were apparent; they were of the proper peculiar greyish blue color, and nothing could be detected whereby any fault could be attached to the article in question. Several other specimens were obtained and compared with the same result. After witnessing its beneficial action on a young child laboring under cholera infantum, with considerable irritability of stomach, I was induced to make inquiry regarding the place where the prescription had been filled, and on comparing it with those that had been already examined, no difference still could be perceived. The mystery was, however, soon solved; as on making inquiry of the pharmaceutist, it was ascertained that the hyd. cum creta used in the prescription had been carefully prepared according to the directions of the U.S. pharmacopæia, whereas all the other specimens that had acted violently, were traced to be of English manufacture.

Repeated use of the article since has only served to convince me, that prepared by the directions of the U.S. P. there is no safer article to children of any age, and would urge all who vend it to prepare it for themselves and abolish the use of any other.

# FORT R. GAMBLE, M. F. October 11th, 1841.

## REMARKS ACCOMPANYING QUARTERLY REPORT,

FOR QUARTER ENDING 30th SEPTEMBER, 1841.

BY CHARLES M'CORMICK, ASSISTANT SURGEON, UNITED STATES ARMY.

Fever has been the prevailing disease during this quarter, and next in frequency have been diseases of the organs connected with the digestive function. Of one hundred and sixty-seven cases of fever reported, sixteen were of the remittent, one hundred and nineteen of the quotidian, and thirty-two of the tertian type. From this it appears that in one hundred and thirty-five of the cases there were daily paroxysms of fever, and I think the strongest peculiarity of character the cases have presented this season, has been the strong tendency they have had to run into and assume the remittent type. In fact, in many of the cases it has been extremely difficult to draw a distinct and plain line of demarkation—to say where the one ended and the other commenced. Some two or three have assumed the form known as "congestive fever."

The three military stations embraced in this report, appear to have been judiciously located, and are probably as healthy as could have been selected in the neighborhood, with due regard to their military importance. The only causes which operate in producing disease at these stations (excepting intemperance alone) may be considered as general to the territory. Such as malarial exhalations, atmospheric vicissitude and the exposure to which the troops are subject day and night.

In regard to the treatment of the fevers arising from these causes, my opinion has undergone a very important change within the last two years; and every day's experience during this period has tended in the most ample and satisfactory manner to convince me that this change has not only been important, but that the practice founded upon it has been judicious and successful in the

highest degree. In relation to the intermittent forms of fever, the change was more in the mode of administering, and in the quantities of the remedies given, than in the remedial agents themselves. Some two years since, I was so unsuccessful in arresting the paroxysms of intermittent fever with the sulphate of quinine, given in two grain doses every hour, although during the apyrexia as much as twelve, eighteen, or twenty-four grains had been given, that I laid it by in despair and resorted to sedatives and relaxants—such as tart. ant. and ipecac., with much success. Still, however, I was not satisfied, and the great reputation the Peruvian bark had so long enjoyed created doubts as to the propriety of abandoning its use. Soon, therefore, I determined to give it another trial in larger doses; and with this view I commenced three or four hours before the expected paroxysm, and gave from four to six grains every hour until it produced its peculiar effects upon the brain-ringing and buzzing sounds in the ears, a sense of stricture across the forehead, and temporary or transient deafness-effects invariably produced in every case where three or four such doses had been given. From this time forward, I was constantly successful; nor do I remember a case in which it failed when the peculiar effects which it displays on the nervous system, were produced. Finding, then, that the enlarged doses had such happy effects, I was induced in many cases where the apyrexia was short, to give it in single doses of from ten to fifteen or twenty grains, according to the violence of the disease. Here, then, I saw cases of intermittent fevers that could not be arrested by fifteen or twenty grains of the sulphate quinine (in fact, as before stated, it daily failed,) given in small and divided doses, yielding immediately to the same quantity given in large doses in a much shorter interval. Again: the small doses seemed, when frequently repeated, in many cases to prove stimulating-flushing the face-producing mental excitement and headache. Scarcely one of the patients to whom small doses had been given complained of the singing and buzzing in the ears, and deafness which were constantly complained of by those to whom large doses had been given. There would then appear to be great difference in the effects produced by small and frequently repeated doses of the sulphate of quinine, and those impressions made by large and full doses. The action of opium furnishes what I consider as a close analogy, acting in small and frequently repeated doses as a stimulant, and in large doses as a sedative. The analogy holds further:-I do not believe the severest pain can modify more strongly the action of opium, and thus render doses beneficial, (that would under ordinary conditions of the system prove fatal,) than that the violence of the fever can, and does modify, the action of the sulphate of quinine; and thus, during severe and highly dangerous fever, render safe, beneficial and sanative, a quantity that in ordinary health could not be tolerated. I have given upwards of three hundred grains in less than twenty-four hours in an extreme case of congestive fever, that was ushered in by that insensibility-speechlessness, inability to swallow—the power of deglutition being entirely lost, cold extremities and surface, pulse feeble and nearly extinct; in fact, it was not to be felt. Here the first effort to administer the sulphate of quinine was made to throw fifty grains into the rectum. In this case the only perceptible effects of the quinine (which was repeated after the pulse rose and the surface and extremities became hot, in twenty grain doses, every hour for twelve or thirteen hours,) were to throw out upon the surface generally, a warm, free perspiration, and to reduce the pulse from one hundred and upwards, to eighty per minute, and rendering it soft and compressible; and, most undoubtedly, by allaying the fever, it enabled the calomel, which had been given every hour with the quinine in ten grain doses, to exert its full effect upon the secretions. Free alvine evacuations were procured, and a speedy and complete recovery followed in a few days.

I am satisfied that the best mode of administering the sulphate of quinine, is to give from ten to fifteen grains as soon as the paroxysm is over. Given thus before or after the paroxysm, it appears at times to fail, for the paroxysm returns, sometimes without and at others with a struggle, (as the patients have described it to me,) between the medicine and the disease. In many of the cases, it would appear that the disease conquers and the paroxysms return; but on examining the pulse it will be

found more bounding, yet softer, and more easily compressed. Although the paroxysm has thus returned, it is much moderated and changed in its character; and I think, with three exceptions, in more than two hundred cases, it has always proved the last paroxysm; the disease having yielded. But to ensure us against such returns, I am confident fifteen grains of quinine given at the end of the paroxysm, and following it by five grain doses every six or eight hours, until half a drachm is taken in the interval, or even in the twenty-four hours; or, by giving in addition to the fifteen grains at the end of the paroxysm, ten grains or fifteen grains an hour, or two before the period for the accession of the next paroxysm, will answer. This latter is the plan I have used successfully in the only few cases of quartan ague I have met with. Such I have found to be the most successful mode of using the sulphate of quinine in the treatment of intermittent fevers, and I have never found it to interfere with whatever antiphlogistic measures it has been necessary to use. General and local bleeding should always precede the use of quinine in every case in which they are indicated. I have found this practice constantly to favor the full impression of the quinine.

In many of the cases of intermittent fever I have observed a regular recurrence of the disease, in some cases every seventh, in others every ninth, fourteenth, twenty-first, and twenty-eighth day. In many cases of this kind I have succeeded in breaking up the morbid catenation and arresting the disease, by anticipating the recurrence of the paroxysms for one or two periods with the sulphate of quinine. In cases of this kind the premonitory stage is very common, and when this makes its attack, the administration of ten or fifteen grains of the sulphate of quinine has invariably proved successful. In this manner, during the past two summers, I have been so fortunate as to free myself from this troublesome complaint.

As I have said at the commencement of these remarks, about two years since, I changed my opinion as to the treatment of the remittent forms of fever. At that time, the practice I was pursuing, was general and local bleeding, as required; free alvine evacuations, the mercurial impression, cold bland drinks, cold

affusions and counter irritants, and I then thought it the most judicious. The practice, however, rarely succeeded in arresting the disease promptly; and no part of this treatment possessed a quick and certain power to arrest the disease generally, unless in some few cases venesection, and that only in the forming stage. Here then, generally, was the practice I was pursuing in what are termed remittent fevers, and by far the greater indeed, nearly all the authors whom I had read and whom I was taught to regard as standard authorities, condemned, in the most unqualified terms, the use of Peruvian bark and all its preparations, in the treatment of this disease. I gave them implicit belief and would have deemed it the height of mal-practice to have used it, as it only should be used boldly in any such case. Notwithstanding all this reasoning by analogy, an idea that its use might be advantageously extended to the treatment of remittent fevers in all their varieties, forced itself upon my mind. My attention was first aroused by the wonderful and almost infallible power I had myself witnessed, that this potent remedy possessed over every variety of intermittent fever; again I reflected that they were the result of the same causes their anatomical characters, to say the least, very similar—that they had, in very many cases, such a decided tendency to assume the characters of each other—that the differences in the accession, duration and symptoms of the paroxysms, are in reality but slight—for instance, the diagnosis between them in many cases is very difficult from the passing of the one into the other-and, in fact, many authors describe them as varieties of the same typeand finally, that they both yield readily and promptly to the same general treatment, except some few cases of the severe forms of each, in which the best devised practice may fail. Here then by name, are two different diseases according to some authors; according to others, only a variety of the same type of fever-not in reality differing more from each other in the accession, duration and symptoms of the paroxysms, or in the nature of the intervening periods, than do the varieties of those which are plainly intermittent among themselves, or those which are plainly remittent—there being as great a difference of character among the varieties of the former, and also among the latter, as between

the intermittent and remittent. From this view of the subject they appear only as varieties of the same disease, and as such I regard them. But admit it otherwise, all who oppose the use of the preparations of Peruvian bark in the treatment of remittent fever, will say the practice I formerly pursued, as stated above, was judicious. I deem it such now, and only regard the addition to it of the timely and free use of the sulphate of quinine, as rendering it almost certain of success in this form of fever. The use of it in remittents is as necessary, judicious, and as harmless, as it is in the intermittent form. It has been, perhaps, as much from a different view of the action of the sulphate of quinine upon the system, as from regarding the two forms as different fevers, that the great opposition to its use in remittent fever has been made; I will endeavor to give a fair and impartial view of its action from personal observation in many hundred cases. I regard its action in large doses as a sedative—certainly all admit it to be the greatest and most powerful anti-periodic or anti-intermittent, known to the profession;—I can aver, from long experience, that I have never known it to increase inflammation, and that I have given it freely under all circumstances, and am fully satisfied, from observation, that it not only has no power to retard the cure of inflammation, but that, in fact, all its tendency is to accelerate it—that it will prevent congestions and inflammations from occurring in fever, by allaying the irritation which excites and causes them. I have given it at all times of the paroxysms with perfect safety, and have never witnessed any alarming or dangerous effects from its administration under any such circumstances. The results of my experience of the effects and properties of the sulphate of quinine, may be thus stated: 1st. It is a sedative possessed of peculiar properties, which may be termed anti-periodic or anti-intermittent. 2d. It has no power to augment inflammation, and may therefore be given under all circumstances. 3d. Nor has it any power to prevent the cure of inflammation, but under many circumstances a direct and positive power to prevent it. 4th. It may be given at any period during the paroxysm; I prefer the decline, or just after it has subsided. 5th. During the course of fever it accelerates the absorption of whatever remedies may be introduced into the system, such as mercury;—this I can only explain, by saying that it allays the fever, and consequently withdraws the excitement of the organs, which as long as it continues must diminish in a great degree, if it does not entirely stop secretion and absorption. 6th. It will allay more speedily and more certainly than any other remedy, those troublesome symptoms, nausea and vomiting, so common in the fevers of this country, and by the same virtue it will arrest the paroxysms of fever, and thus leave whatever lesion may exist, at the point it had arrived at when the fever was arrested, and by thus withdrawing the excitement from the injured organ, will prevent its being hurried beyond this point, and consequently, they will much more readily yield to remedial agents.

Such then are the properties of the sulphate of quinine, and can any one regarding them as such, he sitate to administer it in fever, as it is evident this remedy may safely be employed even in cases where local inflammations exist, and that too, without augmenting them.

In the next place a view of the nature of fever may in some measure enable us to see the *modus operandi* of the sulphate of quinine, and serve to explain its almost specific power in arresting the paroxysms and progress of fever.

Brouissais, in order to explain the power of quinine in arresting intermittent fever, was forced into the absurdity of giving to a stimulant (as he regarded it) the power constantly of subduing gastro-enteritis of which he contended the fever was symptomatic, and such is likely to be the fate of all who contend that all fevers are symptomatic of local *inflammations* of the different organs.

To endeavor to arrive at the proximate cause of fever, solely by examining the bodies after death of those who have died of fever, seems about as hopeless as to examine the wreck a violent tornado has left in passing over a section of country, in search of the cause that originated the tornado. We may see and know the effects each has produced, and ever after be able to ascribe these phenomena to the causes producing them, but they reveal to us nothing in relation to the precise condition of the body, or of the atmosphere they themselves have originated in. Dissection alone cannot be trusted to in seeking the proximate cause of fever. It is doubtless of high importance in teaching us what organs are prone to suffer, and thus arousing our efforts to protect and relieve them;—but when has dissection detected the difference in the brains of those who have died of hypochondriasis, tetanus or hysteria, or can it distinguish the brain of high intellectual endowment, from that of idiotcy. The train of phenomena constituting, and the action of the remedies most successful in arresting the disease, must doubtless be of vast assistance in enabling us to arrive at just conclusions, for if they are disregarded, we fail to detect the great and primary link in train, sequences constituting fever—lesion of the nervous system.

Those who contend that fever is not symptomatic of local inflammations, say: "Fever is an essential or primary disease. The first appreciable event in the chain of sequences constituting fever, is functional injury of the nervous system. The only essential or invariable consequence of this affection is functional derangement of the most important organs of the body, but more especially of the brain, the circulating organs and fluids, the alimentary canal and skin. The changes which have been observed to take place in the blood and other animal fluids, are like the local disorders, secondary and not primary; they may be the source of the phenomena remarked in the advanced stage of the disease, but they are not the source of the disease itself in the first instance." That functional lesion of the nervous system is the first link in train of phenomena, is generally admitted, and that this universally follows the impression of the remote cause, must also be admitted; in other words, they stand in relation of cause and effect. The truth then is, in my opinion, that the malaria or other cause of fever, first acts as a morbid irritant on the nervous system, sometimes more forcibly on the cerebro-spinal, and at others more so on the ganglionic department, causing a derangement of function therein; the capillary vessels throughout the organs become involved, and congestions and inflammations are excited, and whatever organs have suffered most from the predisposing and exciting causes, will be most violently affected. There is evidently great disturbance of the nervous and vascular systems, and they evidently act and react on each other, and thus produce the phenomena of the paroxysms. The inflammatory congestions that occur in the first paroxysm are aggravated and increased by every succeeding one, and unless arrested by suitable means will in a great majority of cases, end in organic lesion of some vital organ, and terminate fatally.

Moreover, if from the constant and invariable effect of any remedy in arresting disease, any certain conclusion can be drawn, the almost specific power of the sulphate of quinine in subduing the paroxysms of fever, must at least be regarded as indicating the nervous system as the *fons et origo* of the cause of fever, for it is manifest that the whole power and effect of this potent remedy is exerted upon this system, whether or not the remedy be regarded as a sedative. The excitement and derangement produced in this system by the remote cause, points out its action to be that of a morbid irritant. It cannot consist in inflammation, as quinine possesses no immediate and prompt power to arrest inflammation, nor can it be, as Dr. Cullen supposed, sedative, for if it acted thus, it would not constantly produce excitement and derangement.

This irritated state of the nervous system is the sine qua non, the original, fundamental, or proximate cause to which all the other phenomena of fever are successive. It consequently follows, that if this irritation be allayed and its return prevented, the phenomena of fever will cease, and such is the fact.

If the fever has been suffered to continue for any length of time, the different organs may, and in many cases must be found in various morbid conditions. It must therefore be remembered, that removing the cause can only prevent further injury, and that whatever lesions exist up to the time of its removal, must remain and require proper treatment to subdue them. It is like plucking a thorn from a wound, it does not immediately repair the injury it inflicted, but on being withdrawn, ceases to act as an irritant, and leaves the part in a condition most favorable to recovery.

Regarding this then, as the true pathology of fever, the treat-

ment may be considered to consist mainly in the following indications, viz.

To arrest the fever at its outset, or as soon thereafter as practicable; to obviate the tendency to inflammatory congestions, especially of the liver, stomach, intestines and brain, by moderating the febrile reaction, and finally to remove the local disorders and complications that may have occurred. The remedy on which I place the greatest reliance to arrest the progress of fever, is the sulphate of quinine. To accomplish this object, it should be given boldly in large doses. General and local bleeding, cathartics such as the mercurial preparations, castor oil, sulph. magnesia, and magnesia calcined, cold drinks and ablutions, are the means adapted to allay the febrile reaction; and to obviate the tendency to inflammatory congestions, and to combat the local disorders, topical bleeding, counter irritants, and alteratives.

Such is a general outline of the practice I have pursued for nearly two years past, in the treatment of the fevers I have met with in Florida, and I can safely say, that it has proved successful in every case which has been under my immediate charge in which it was adopted, amounting to several hundred. I have at times prescribed for many patients without having seen them during their illness, and even in every case of this description, under, of course, every disadvantage, it has been full as successful, with one solitary exception. This was the case, private Campbell, whose death is recorded in this report. He was on duty with a detachment stationed at the Anscilla ferry, near old Fort Roger Jones; I was on my way to the place to have him removed to the hospital at Fort R. Gamble, when his death was reported to me. He died very suddenly, and from the information I received, I believe his death resulted from the fever known as "congestive fever," which I have seen in that locality; all the other cases occurring at that station came under my immediate charge and yielded readily to the treatment.

A few remarks, in regard to the mode of using the sulphate of quinine, may be necessary. In all cases strict attention should be given to the state of the vascular system, for as has been before remarked, general and local bleeding should always precede

the exhibition of the sulphate of quinine in every case in which they may be indicated, inasmuch as this practice will be found constantly to favor the action of the quinine, probably by diminishing excitement and moderating the reaction of the vascular on the nervous system, with the same view either before or soon after its administration, an active mercurial cathartic to procure free alvine evacuation should be given, to be followed, if necessary, by a combination of sulph. magnes., and magnes. calcin. or castor oil. I have concluded, from experience, that the best time for the sulphate of quinine to be given, is immediately at the end of or as a paroxysm subsides, or as near this time as possible; nature herself would seem to indicate this, for at this time there is generally a calm, a pause in the disease. There is no general rule to determine the quantity of sulphate of quinine that may be required. In ordinary cases I have found from fifteen to twenty-five and thirty grains sufficient. In the severer forms a larger quantity becomes necessary, and in dangerous cases such as I cited, when endeavoring to show how the severity of fever modified its action, from ten to twenty grains may be given every hour, in combination with ten grains of calomel. Here the mercurial impression is an agent whose auxiliary power we require.

For those cases commonly called "congestive fevers," which I had met with previously to having adopted this practice, there seemed to be no remedies on which any reliance could be placed. It has been in the severe and extreme cases of this formidable malady that I have seen this remedy (sulph. quinine,) exhibit to the greatest advantage the herculian and almost incredible power it possesses over the cause originating, to which it would almost seem to act as an antidote. In cases of this nature it must be given fearlessly in large and frequently repeated doses, and persevered in until its effects are manifest.

One of the most annoying and troublesome symptoms in the fevers of this section of country is the irritability of stomach, accompanied with incessant nausea and vomiting. Hitherto in a large majority of severe cases I have had this difficulty to contend with, and in many instances it had resisted every remedy.

Under the present mode of treatment, I have had no difficulty in relieving and preventing this symptom.

It is said calomel adds efficacy to every remedy with which it may be combined; for instance, it renders squills more diuretic, &c. The same remark applies to the sulphate of quinine in relation to the mercurial preparations. What a happy combination then, especially in cases of fever, these two remedies must prove, each possessing such remarkable powers. I have seen a single dose of twenty grains of quinine enable the mercurial preparations to produce their full impression, even to ptyalism, in patients who had resisted every effort that was made to excite it for many days. I think, however, this effect is easily explained. In these cases the system labored under such constant and continued fever during the whole time it resisted the mercurial impression, the different organs were in such a state of irritated excitement, that both secretion and absorption were nearly, if not entirely suspended; the quinine by subduing the fever, allays this excitement, on the removal of which, the functions are resumed, the remedies are taken up, and ptyalism is produced; or in cases where the mercurials have not been pushed so far, the secretions are restored to a healthy standard without this disagreeable and harassing accompaniment.

Nearly every case of dysentery I have met with this season has been unusually severe and dangerous. The immediate and exciting cause of the two cases reported as fatal, I ascribed to the excessive use of ardent spirit and subsequent exposure. In the case of private Byrnes, I understood from an officer that immediately on leaving the general hospital at Cedar Keys, he got excessively drunk two or three times, and immediately after was attacked with dysentery.

In some cases general, and in nearly all, local bleeding, blisters and calomel, with the free use of opium, gum-water, and mild laxatives, was the general practice I followed, and in cases where complicated with intermittent, quinine was highly useful. In the case of private Hackett, during the time he labored under dysentery, intermittent fever supervened; it yielded to a few grains of quinine, but the original disease continued and did not yield

to any remedy. In this case slight accidental salivation occurred. In the case of Lieutenant Johns, who had a severe and dangerous attack of this malady, the dysenteric discharges during several days of his disease recurred at regular periods, usually about 10 o'clock in the morning, and lasted until late in the night. During the time they thus lasted they were as distressing and harassing as they had been at any period of his disease, and during the remission of the discharges he was easy and rested well. With a view to arrest the recurrence of these discharges, I anticipated a paroxysm with a large and full dose of the sulph. morphia, but it had not the desired effect; I therefore anticipated the next paroxysm with twelve grains of quinine. The disease yielded, convalescence commenced, and since then he has returned to duty.

I have the honor to be,

Very respectfully,

Your obdt. servant,

CHARLES M'CORMICK,

Assistant Surgeon, U. S. A.

[See "Remarks on the Intermittent and Remittent forms of Fever, by JNO. F. PETHERBRIDGE, M.D. of Anne Arundel Co. Maryland," in the 1st No. of the present Vol. of this Journal, page 23.

This Essay is highly confirmatory of the views of Doctor M'Cormick, in reference to the value of sul. quinine, especially in large doses. The foregoing article of Doctor M'Cormick, as well as that of Doctor Petherbridge, are well worthy the especial notice of the profession.—Editors.]

# MEDICAL LITERATURE.

### HISTORY OF JEWISH PHYSICIANS.

BY E. CARMOLY.

(Continued.)

### § XLIX.

#### JACOB BEN ABBA MARI.

Jacob Ben Abba Mari, was another physician of Marseilles; his family was of the highest rank among the Jews of that city. Benjamin of Tudela,\* speaks of his grandfather Simeon ben Antoli, and of the brother of this last, the master Jacob, both of them professors in the Rabbinical school of Marseilles. Abba Mari, son of Simeon ben Antoli, who walked in the footsteps of his father and uncle, had two sons; the first, called Isaac ben-Abba Mari, is celebrated for his book which was crowned (Sefer ha-Ittur,) the second, is the physician who forms the subject of this article.

After finishing the regular course of study, he took up his residence at Lunel, and devoted himself to medicine, and was under the preceptorial instruction of Samuel Aben Tybbon, who, so far from feeling any jealousy of his talents, brought him forward as a young man of the brightest promise, and gave him his daughter in marriage.

1842.]

Jacob ben Abba Mari, passed a great part of his life at Narbonne and at Beziers, where he practised his profession. At a later period, he was called to be the physician of the Emperor Frederick II, of Naples, who loaded him with honors and presents. He finished in 1232, the translation of many commentaries of Ebn-Roschid, on the works of Aristotle, as he states in the preface to the treatise on Categories.\* See his own words: "God be praised, in that he has not disappointed my hope, nor withheld his grace from me, Jacob, son of Abba Mari, son of Simeon, son of Antoli, of happy memory; and has granted me the power to finish in the month of the second Adar, of the year 4992 of creation, (February, 1232 of the Christian era) at Naples, the translation of the work on The Art of Speaking, (Sefer Chokhmat ha-Dibbur,) composed by the philosopher, Ebn-Roschid (Averroes,) in an elegant and correct style, in the form of a commentary upon the books of the master of this science, the prince of philosophers, Aristotle. The books I have translated, are five in number, four from Aristotle; viz. the book of Categories, (Sefer ha-Mamorot,) that of Interpretations, (Sefer ha-Melizeh,) that of Analysis, (Sefer ha-Hekasch,) and that of Topics, (Sefer ha-Mofet.) The fifth book which precedes them, is the introduction to the Categories of Porphyry." This last work bears the Hebrew title of Mebot ha-Higaion; it was translated at the request of the learned men of Narbonne and Beziers, as he has stated in the preface to the work, a MSS. in the same Library at Paris.† He also translated the Almagest of Ptolemy,† and the commentary of Ebon-Roschid, upon this celebrated work, which he concluded with a kind of introduction from another Arabian writer at Naples, in 1239, as is discovered from an inscription which he placed at the end of these translations, MSS. found in the same depository. S Besides these Hebrew versions, we have by him a translation of Alfragini

<sup>\*</sup>MSS. Hebr. de la Biblioth. Royale de Paris, ancien fonds, No. 320; fonds de la Sorbonne, No. 257.

<sup>†</sup> MSS. Hebr. fonds de l'Oratoire, No. 101, 108; fonds de la Sorbonne, No. 250.

<sup>‡</sup> Ibid, Bib. ancien fonds, 439.

<sup>§</sup> Ancien fonds, No. 438.

which is preserved in the Libraries of the Vatican and Paris.\* This is a treatise on Astronomy, divided into thirty-two parts, to which the translator has added a thirty-third chapter. Christmann has given us a Latin translation from the Vatican copy, as is declared on the frontispiece: Frankfort, 1590.

Jacob, also wrote a very good work upon the Pentateuch, entitled (Sefer ha-Melamid,)† and after having enjoyed a fame whose brightness envy did not dare to tarnish, he died at an advanced age.

## § L.

### SCHOOL OF SALERNUM.

At the same period that Jacob ben Abba-Mari became so celebrated at Naples, the school of Salernum produced many very distinguished physicians, among whom were Abon 'lhakim, Farraguth, &c.

Abon 'lhakim, originally of Turin, is one of the most learned Hebrew physicians that came from that celebrated school. He is immortalized by an Arabic treatise on the Preservation of Health, the manuscript of which, is preserved in the rich Library of the Escurial.

Farraguth was another Jewish physician of the Salernian school, who is incorrectly regarded by some historians, as belonging to the faculty of Montpelier, and as having been attached to Charlemagne, in the capacity of a physician. All that is known on this subject, is that he translated from the Arabic into Latin, a medical work of Iahyah ben-Djesla. This translation was published as late as 1532. It is dedicated to a prince Charles. The editor having deemed it proper to insert Carolo regi ejus nominis primo, from this it was supposed, that Charlemagne was the prince referred to. But this great monarch died at the beginning of the ninth century, while the Arabic author must have lived about the middle of the eleventh. The fact is, that the Charles referred to, in the dedication of Farra-

<sup>\*</sup> Ancien fonds, 457.

<sup>‡</sup> CASIRI, Biblioth. book I.

<sup>†</sup> MSS. of Royal Library of Paris.

<sup>§</sup> See previous sec. xviii.

guth, is, as has been very correctly observed by Astruc,\* Charles of France, brother of St. Louis, king of Naples and Sicily, who ascended the throne in 1266, and who died in the year 1285.

Hillel ben Samuël, another doctor of this school, attracts attention, not only as a translator and physician, but still more, as a profound philosopher. He was originally of Verona, where his grandfather became celebrated by the name of Eleazer of Verona. After having finished the regular course of study, Hillel opened a correspondence with the most enlightened men of his own country. Among others, he held a correspondence with Zérachia ben-Isaac ben Scheeltiel Chen, who addressed him from Rome some answers to questions on philosophical subjects.† Some of his works have been preserved; of this number are,

1st. Sefer Tagmolè ha-Nefesch, a treatise on the Mind, which is divided into two parts; in the first, the author descants on the essence and powers of the mind; in the second, on the moral rewards and punishments of paradise and of hell, and the opinion of the ancient doctors on these subjects. The author himself states that he finished his work at Forli, in 1291.‡

- 2d. Sefer Keritut, a Hebrew translation of the Surgery of Brunus of Longoburgo, § a work which in other MSS., has the title of Sefer Melechat ha-Iad.
- 3d. Commentary on the twenty-five philosophical principles which are found at the beginning of the second part of Moreh-Nebuchim of Maimonides, a MSS. in many public libraries.

## § LI.

### SCHOOL OF ROME.

After having devoted our attention to the school of Salernum, as the principal source of Jewish medicine in Italy, it is time to refer to that of Rome, where many doctors made themselves celebrated during the thirteenth century. Of this number, was

<sup>\*</sup> History of the Faculty of Montpelier. † See following section liii.

<sup>‡</sup> MSS. codicis Hebraici Biblioth. J. B. De Rossi, t iii. page 148, cod. 1342. § MSS. in the Royal Library of Paxis, ancien fonds, No. 319. || Ibid. No. 413.

Nathan Hamati, of whom we have already had occasion to speak. He was originally of Syria, and, as his name would appear to indicate, of Hamat. He composed an abridgment of the Canon of Ebn-Sina, (Avicenna,) but his translations from the Arabic into Hebrew, form the most considerable part of his works. We subjoin a list of the works which he translated.

1st. Mamar ha-Meschichot, a medical treatise of Zoharani, which is found in MSS. in the Royal Library of Paris.\*

2d. Sefer ha-Perakim, the aphorisms of Hippocrates, with the commentary of Galen, a MSS. in the same Library. † The translator, in a note which is found at the end of the version, says: that he made it from the Arabic translation of Hanan ben-Isaac, and that he completed it on the 22d of the second Adar, in the year 43, that is to say, the 5043d of the creation, which corresponds with the 1283d year of the common era.

3d. Perké Moscheh, the aphorisms of Maimonides, as we have referred to in speaking of this illustrious man.

4th. The Canon of Ebn-Sina, a MSS. in the Library of De Rossi, his translation from which he finished in 1273.§

5th. Sefer be-Rafuot ha-Ain, a treatise by Abou'lkassem, on Ophthalmic medicine, which is preserved in MSS. in the same collection.

Boniface VIII, that wise and intrepid pope, had for his physician, a Rabbi named doctor Isaac. He is referred to in the letter of the celebrated Serachia ben Isaac Chen, of whom we shall speak in the succeeding paragraph, addressed to the physician Hallel ben Samuël.

This is probably the same physician and Rabbi Isaac, that the poet Emmanuël places in his paradise, I for all the personages of that remarkable poem, are, as it is known, historical characters.

Another physician of Rome, Isaac ha-Levi, has obtained a place in the records of Jewish medicine, by the work of Ebn-Sina, which he had translated from the Arabic into Hebrew, by Serachia ben Isaac Chen.\*\*

¶ Marchaberot, p. 262.

<sup>\*</sup> Ancien fonds, No. 429. † Ibid. No. 362, and 396. † See above section xxxv. p. 311. § Diz. Stor. t. i. p. 51.

<sup>||</sup> MSS. Codicis Hebr. Biblioth. De Rossi, vol. iii, p. 149, cod. 1344. \*\* See succeeding section liv.

## § LII.

### SERACHIA BEN ISAAC CHEN.

The name of Serachia ben Isaac ben Scheelthiel Chen, will conclude the list of the Roman physicians. This doctor, who was originally of Spain, has claims upon the consideration and gratitude of the republic of letters, not for his scientific works, but for having inspired the Roman Jews with a love of philosophy and the study of the sciences. A native of Barcelona, and coming from the celebrated schools of Catalonia, he went to establish himself at Rome, to kindle there the sacred flame of science. He taught in that city publicly the philosophy of his time, and composed and translated many philosophical and medical works. Many learned men, Italians as well as Spaniards, consulted him in regard to their studies, such as the famous Jehudeh ben Solomon of Barcelona, and the physician Hillel of Lombardy, (Hillel ben Samuel.) We have remaining some of his explanations of the difficult points of Moreh Nebouchim of Maimonides, in reply to questions that this most eminent sage had submitted to him upon this celebrated book; also many letters upon the same subject, which he had addressed to the latter.

In the first of these letters, he says to him among other things, that having observed from his questions, that he followed the system of Nachmanides, who attacked the philosophical opinions of Maimonides, he remarked in reply, that this doctor was no philosopher, nor had any knowledge of philosophy. He then remarked to him that he had already replied to different questions which had been addressed to him, in an essay composed for the doctor Jehudeh ben Solomon of Barcelona; finally, that his reply only embraced the subject of the difficulties of the book of Moreh Nebouchim, and not of other questions, from the want of time, for he was much occupied in preparing for his return to Spain, his native land, where he wished to repose in death by the side of his ancestors. The author has not informed us of the nature of the other questions to which he was prevented making a reply; they were most probably medical questions, for Hillel,

who submitted these questions to him, was alike distinguished as a great physician and profound philosopher, as we have already shown.

We would again refer to passages of the correspondence of Serachia to prove how eminent this doctor was in critical literature. As regards his medical knowledge, the voice of eulogy is unanimous.

### § LIII.

#### HIS WORKS.

The obscurity which prevails in reference to the productions of our physician, induces us to give here a complete list of his writings, which have come down to us embracing all his original works, as well as his translations from the Arabic into Hebrew.

- 1st. Treatise on the faculties of the Mind, by Abou-Nazar Al-Farabi, translated from the Arabic into Hebrew; the Royal Library of Paris\* possesses one copy of this work.
- 2d. The Canon of Abou Ali Ebn Sena, translated into Hebrew for the physician Isaac ha-Levi, as he himself informs us at the beginning of the second book of this work, which is preserved in MSS. in the same Library.†
- 3d. Sefer ha-Tob ha-Gamur; a treatise on the summum bonum or sovereign good, translated from the Arabic for the Rabbi Schabtai ben-Solomon.
- 4th. Explanations on some passages of the book of Moreh Nebouchim, composed for the learned Jehudeh ben-Solomon, MSS. at Paris.†
- 5th. Letters to the physician Hillel, of Lombardy, upon some difficulties in the same book of Moreh.
- 6th. A Philosophical Commentary on the Proverbs of Solomon, quoted by the author in the first letter to Hillel ben Samuël.
- 7th. The Metaphysics of Aristotle, translated into Hebrew at Rome, in the year 1284.

<sup>\*</sup> Ancien fonds, No. 255. † Ibid. No. 375. † Biblioth. Royale, fonds orat. No. 100. § MSS. Ibidem, and in our Cabinet, 193.

8th. The Physics of Aristotle, translated into Hebrew, as likewise the succeeding treatise at Rome, in 1284.

9th. Sefer Schamaim ve ha-Olam, of the heavens and the earth. These three last works are found in MSS. in the Library of Turin.

10th. Commentary of Ebn-Roschid on the Metaphysics of Aristotle, translated from the Arabic, a MSS. in the same Library.

11th. Commentary of Ebn-Roschid on the Physics of Aristotle, translated into Hebrew for Rabbi Jachya ben Zidkia, found in MSS. in the same collection.

12th. A Treatise on the medicine of Maimonides, composed for the king of Egypt, a MSS. in the Royal Library of Paris.\* This is the same treatise composed by Maimonides for the king Alasdhal.† Another copy of the same work, is found in the Library of de Rossi,† under the erroneous title of the Book of Aliments.

## § LIV.

#### THE KARAITES.

If we pass from the Italian physicians, whom we have just enumerated, to the masters of the healing art, who are the most celebrated in Greece, we find in the first rank Ahron ben Josef, who was at the same time a sound grammarian, commentator and poet. Ahron was generally considered the oracle of the Karaites, of which sect, he was the chief at Constantinople in the reign of Manuel II, Paleologus.§

Mardochée ben Nesim represents him as a man deeply versed in the intelligence of the law, in the study of nature, and even in the learning of the Rabbis. But if he really applied himself to this last study, it appears, that it was only that he might the better combat it. His ability and capacity have gained for him the reputation of one of the best writers that the sect of the Karaites

<sup>\*</sup> Ancien fonds, No. 206. There is an error of the copyist, which it is proper to correct; Secharia ben Ishak ben Schaelthiel Chen de Marseille, in place of Barcelona.

<sup>†</sup> See above section xxxv. † MSS. cod. Book i. p. 99.

<sup>§</sup> Dod. Mordochaï, chap. xi; de Boissi Dissert. Critique, No. xi.

has produced. The following comprehends a list of his works, the most of which are unpublished.

1st. Sefer ha-Mubchar, the select work, a commentary on the Pentateuch, which he composed in the 5054th year of the world, and the 1294th of the common era. The author applies himself principally to a literal commentary on the text of the Scriptures; according to the method of the Karaites, who drew all their explanations from it, without having any respect to those that the Rabbis authorise by their version. He made frequent grammatical observations, by the aid of which he determined the proper meaning of each word, and cleared up a great many of the difficulties which arise, from various readings of the Holy Scripture. He quotes the celebrated grammarians of the Rabbinical party, such as Jonah ben Ganach, Kimchi and others. In general, Ahron freely adheres to those among the Rabbis, whose interpretations are judicious, and in his preface he recommends those of his own sect, to study carefully the books of the doctors of the version. This commentary, which is found in MSS. in the Royal Library of Paris,\* has been printed.

2d. Commentary on the book of Joshua, found in MSS. in the Library of Leyden.†

3d. Commentary on the book of Judges, MSS. in the same Library.

4th. Commentary on the book of Samuel, also found in the Library of Leyden.

5th. Commentary on the book of Kings, MSS. in same Library.

6th. Commentary on Isaiah, MSS. in same Library.

7th. Commentary on the Psalms, likewise found in MSS. in the Library of Leyden.

8th. Commentary on the book of Job, a work which is quoted in his Sefer ha-Mubchar, but which is little known.

9th. Khélil Jofi, an excellent Hebrew Grammar, printed at Constantinople 1581, 8vo.

10th. Seder Tefilot, order of prayer, according to the rites of the Karaites. Venice, 1528 and 29, 2 vols. 8vo.

<sup>\*</sup> Ancien fonds, No. 70; fonds Oratoire, No. 17.

<sup>†</sup> Catalog. Biblioth. Lugd. Bat. p. 405.

## § LV.

### COUNCILS AGAINST THE JEWISH PHYSICIANS.

The sway which the Israelites had obtained over the domain of medicine, which we have just seen, aroused the jealousy of the faculty of Paris, and caused them to revive against them the enactments of the canon law. In 1301, it published a decree prohibiting either man or woman of the religion of Moses, from practising medicine upon any person of the Catholic religion.

In Spain, the Christian priests also practising the art of healing, made use of force to defeat their rivals, whom they could not excel, and they prohibited Christians from employing Jewish physicians in the treatment of their diseases.\*

Their example was followed in Provence, where the councils held at Avignon in 1326 and 1337,† and also the synodical statutes of Rouergue of 1336,‡ likewise prohibited the Christians from employing Hebrew physicians or surgeons. Happily the afflicted did not ratify the canons of these councils, and continued to employ these masters of the art.

At Montpelier many priests excommunicated the members of their flocks who employed Jewish physicians. They accused them of practising medicine without having passed an examination, or possessing the theory of their art. Their accusations so far prevailed, that James, king of Majorca, Count of Roussilon and Sardinia, prohibited by letters patent, the Israelites from practising medicine within the limits of the faculty of Montpelier, without having been examined and duly licensed, which letter king Philip VI. confirmed in 1331.§

Notwithstanding this formal interdiction, we believe that the accusation of the priests of Montpelier was ill founded, for the Jews were then too well instructed, and too enlightened to devote themselves without proper preparation, to the practice of medicine. On the contrary, it appears more probable, that it

<sup>\*</sup> AGUIRE, Collect. Maj. Concilior Hisp. book iii. p. 590.
† Concil. t. ii. p. 187. † Thesaur. Nov. t. iv. cul. 769. § Ordonn, t. ii. p. 71.

was their knowledge of the art which excited the jealousy of the priests against them, for at this period the Jews not only practised with great success, but they were also at the head of the faculty, as we shall see in a future paragraph.

## § LVI.

PROFATIUS, REGENT OF THE FACULTY OF MONTPELIER.

The lively gratitude of the faculty of Montpelier towards its founders, and the continually advancing progress of the Jews in the Hippocratic art, induced them in the year 1300, to choose its regent from among them. The person selected was the learned Profatius, of the Jewish community of Marseilles. This distinguished favor conferred on the Jewish physician, soon aroused the jealousy of the faculty of Paris, who revived against the Jews, as we have already seen, the enactment of the canon law. But this did not prevent Profatius from either practising or teaching medicine. He also applied himself much to astronomy, and it appears that he made considerable progress in it. He composed moveable tables of the seconds—with the equations of the moon, and the mean movements of the head of the dragon, and a table of the longitude of many countries and cities, mostly in Asia and Africa.

Profatius also laid down the regulations in the Almanac, which he composed at Montpelier in 1302, but he gained the most reputation from the observation which he made in 1303, of the greatest declination of the sun which he found to be 23° 32'; this observation served to determine the theory of the movement of the earth, and the inclination of its axis, at least from that time; this observation is also honorably referred to by almost all the astronomers, such as Copernicus,\* Reinhold,† Clavis,‡ Justinus,§ &c.

<sup>\*</sup> Lib. iii. Cap. 2.

<sup>‡</sup> Sphæram, Jo de Sacrobosco, Cap. i. p. 252.

<sup>†</sup> Theoricis, p. 239.

<sup>§</sup> Justin. Cop. 2.

## § LVII.

The school of Montpelier was occupied at that time in the discussion of a superstitious question relating to the talisman of the figure of a lion, which was used as a remedy. Abba Mari, Rabbi of this city, wrote upon this subject in 1303, to the celebrated Solomon ben Adereth of Barcelona, to demand of him if it was true that he had countenanced this superstition.\* The latter replied, that in fact he had tolerated it, because the great Nachmanides had not only permitted but practised it himself.† But the Montpelier doctor combatted this opinion, and proved to him that the famous Isaac des Lattes, although himself making use of this talisman subsequently to Nachmanides, did not hesitate to declare that his opinion was altogether opposed to it.†

This latter, whose whole name is Isaac ben Jehuda des Lattes, was held in the highest consideration, not only in France, but throughout all Spain; he was also the same person that Solomon ben Adereth selected to compromise the dispute between himself and the learned Rabbi of the school of Montpelier, Solomon de Lunel, which had originated in the discussion of the talisman. || The Rabbi of Barcelona reproached des Lattes for his silence in the discussion, which he had in some degree provoked by his own use of the figures of the lion in the treatment of many diseases. But des Lattes, in place of making peace between the two doctors of the law, ranged himself under the banner of his countrymen, and wrote a violent letter against the Spanish Rabbi, because he had taken advantage of the occasion to fulminate in 1304, a decree which prohibited the Jewish youth from studying philosophy before the age of twenty-five years.

This decree produced great excitement, and found a host of enemies: the combat was warmly waged, particularly in the Montpelier school, but the banishment of the Jews from France in 1306, terminated this intellectual war. It was a most revolting

<sup>\*</sup> Minchath Kenaoth, letter i. † Ib. letter iii. p. 23. ‡ Ib. letter v. p. 32. § Ibid. les. xxxvi. p. 80. || Ibid. and let. xliii. p. 96. ¶ Minchath Kenaoth, Ib.

spectacle to see so many learned men who had adorned and benefitted France, proscribed wanderers, without a country, or an asylum. Some of them expired of grief on the road. Abba Mari gives in his work\* heart-rending details of the expulsion of the Jews from Montpelier, at the head of whom, were the professors and the doctors of the faculty.

## § LVIII.

SAMUEL OF CAPUA, AARON OF MESSINA, MISCHEL OF VERONA,
ISAAC OF NAPLES.

Whilst Philip the fair, thus banished the Jews from his king-dom, another French prince, Charles II, king of Naples, protected them in Italy.

This prince, who upon the authority of Muratori, had no equal for liberality, probity and clemency, had as his physician, a Jew named Samuël ben-Jacob of Capua, who had acquired a reputation by the translation of many treatises of Arabic medicine. We shall refer only to his version of the medical works of Iahya ben-Masoriah, found in MSS. in the Royal Library of Paris.† In the preface to the work, the translator informs us that he made his version not from the original Arabic, but from a Latin translation, recently published in Egypt.

It was at this epoch that the master Ahron flourished, who was a distinguished physician of Messina. In 1305, the Rabbis of this city having excommunicated him, he preferred his complaint before the royal court. The judge condemned each of the two chiefs of the society to pay ten ounces.‡ The doctor Mischel ben Abraham ha-Rofa, who practised his art at Verona,§ and the learned Isaac, the physician attached to the person of Robert of Anjou, king of Naples. This prince, who reigned in 1309 to 1348, was one of the most enlightened sovereigns of his

<sup>\*</sup> Ibid. let. c. p. 179. † Rocchi Pirri, Sicilia Sacra, t. i. p. 410.

<sup>‡</sup> MSS. Heb. t. i. p. 480. Bibliotheque, royale de Paris, ancien fonds, No. 142.

<sup>§</sup> Cod. Hebr. de l'ancien fonds, No. 379, 380, 381, 382 and 408.

time. Boccage and other writers, place him, as regards science, on a par with Solomon.\* He was an eloquent orator, and also philosopher; a learned physician, and profoundly versed in the most abstract theological subjects. He took pleasure only in the conversation of learned men; he loved to hear them read their works, and bestowed upon them commendations and rewards. He invited to his court, all those who had any reputation, and even those whom he did not invite, presented themselves, well assured of being received with that welcome which they merited. Finally, he collected at great expense, a very valuable library, which he entrusted to the care of Paul de Perouse, one of the most learned men of his time.

Among the numerous works contained in this library, there were many in Hebrew, which king Robert caused to be translated into Latin, by his Jewish Physician, particularly the works of Jehuda ben Moseh Romano, as we read at the end of a work of this learned man found in MSS. in the Royal Library of Paris.†

### LIX.

### THE ANAVIM FAMILY.

We could not speak of the Jewish physicians of Italy without taking notice of the Anavim family, which bears the title of physician, (Rofé) from the fact of this science being hereditary in this celebrated family. The most distinguished members of the house of Anavim, are Benjamin Rofé and Abraham Rofé, who flourished at Rome, in the reign of Innocent III, of whom, they were most probably the physicians. The glory connected with their name was transmitted to their descendants, who were very celebrated for their literary works, such as Jehuda son of Benjamin, and his two brothers Zedkia and Jekuthiel, Benjamin and Zedkia, sons of Abraham the physician.

The first is named in the Sefer Hilchoth, of Alfesi, which he

<sup>\*</sup> Boccage, Genealogia Deorum, let. xiv. chap. 9. Benvenate da Imola. Comment in Dant. Antiq. Itat. t. v. p. 1035.

<sup>†</sup> Ancien fonds, No. 444.

wrote in 1247, to the Rabbi Solomon ben Elia,\* Jehuda Iaaleh, son of Benjamin ha-Anav, a name by which he is also designated by the author of the book Sibulé ha-Lekat, as has been already sufficiently explained.† He was an excellent interpreter, and has left us commentaries on the said Sefer Hilchoth, which are found in MSS. in the Royal Library of Paris, t with other books of his composition. The second, Zedkiah, a younger brother of Jehuda, is mentioned in terms of eulogy, by his namesake and cousin german, the author of Sibulé ha Lekat. The third Jékuthiel, has the merit of having given being and education to a great moralist, the pious Jéchiel, author of the excellent work Mealoth ha-Middoth. The fourth, Benjamin, son of Abraham Rofé, left many works to posterity. One of these, entitled the Fourteen Doors, is found in MSS. in the Royal Library of Paris. The fifth, Zedkiah, younger brother of the preceding and pupil of Jehuda Iaaleh, is the author of the book Sibulé ha-Lekat, already mentioned. It contains an exposition of every thing referring to the religious rites and ceremonies of the Jews. This book is unpublished, but a very good abridgement of it has been printed.

A descendant of this learned family, the pious Menachem Rofé Anav, lived at Rome, where he died in the odour of sanctity.\*\*
This is probably the same doctor, with Menachem Zemach ben Abraham Rofé, ben Benjamin, ben Jechiel, who transcribed in 1322 and 23, many manuscripts quoted by doct. Zuuz of Berlin.††

## § LX.

### LOWER EMPIRE.

The view which medicine in general presents, during the continuance of the Lower Empire, deserves a little attention. We

tt Geicer, Wissensch. Zeitschr fur Jud. theolog. tom. iv. pag. 192.

<sup>\*</sup> MSS. de la Bibliotheque royale de Paris, fonds Sorbonne, No. 222.

† See Koré ha-Doroth, p. 24.

† Fonds Sorbonne, No. 199.

§ MSS. de la Bibliotheque Royale, fonds Sorbonne, No. 59, 29, 71, 90, 113, 158, &c.

|| MSS. Heb. de la Bibliotheque Royale de Paris, fonds Sorbonne. No. 217.

¶ Ibid. No. 246.

\*\* Emmanuel, Macheberoth, xxviii...

will find perhaps during this period some observations, collected in the hospitals, which were established about that time at Constantinople, and in many other of the cities of Greece, and of Europe and Asia;\* but there were only scattered reports, with which we are not occupied at the present time. The Karaites were perhaps the best physicians of this empire, for we always find them occupied with this art, and as we have seen it in their hands at the end of the thirteenth century, we find it still there at the beginning of the fourteenth. Ahron ben Eliá was born at this period at Nicomedia, the ancient capital of Bithynia. This celebrated man was distinguished both as a philosopher and physician. He professed his art at Constantinople, where he died in the month of September, 1369. Ahron ben Eliá is next to Ahron ben Josef, the most highly esteemed writer among the Karaites. The following is a catalogue of his works.

1st. Ez Chaim, the Tree of Life. This work was finished in 1366, is a philosophical and theological treatise, almost of the same class, as the Moré Nebouchim of Maimonides. Mardocheus ben Nissimt eulogises greatly this work, and which in truth is deserving of being read.

- 2d. Sefer Mizvoth, book of Precepts, a work divided into twenty-five treatises, almost in the class of the Mischna Torah of Maimonides, the author finished it 1354.
- 3d. Kether Torah, the Crown of the Law, a literal commentary on the Pentateuch, composed as the author has himself informed us, in the beginning of his work in 1362. The first of these works bears also the title of Nozer Emunim, as has been well established by the learned doctor Delitzsch in his Apercu on this book.

\* CABANIS, Revol. de la médecine, page 116. 

N. B.—The European Exchange, the Bulletin Medical de Belge, from whose pages we have translated the articles on the history of the Jewish Physicians, not having been received for some time, we fear it has been discontinued; we regret this, as we should have been gratified at being able to lay the work in full before the readers of this Journal, but we must of necessity suspend the record thus abruptly. If it should be received at a future time the series of articles may be completed in a different form, but time must determine that matter.

# BIBLIOGRAPHICAL NOTICES.

On Regimen and Longevity, comprising Materia Alimentaria, National Dietetic usages, and the influence of Civilization on Health and the duration of Life. By John Bell, M.D. lecturer on Materia Medica, Fellow of the College of Physicians of Philadelphia, Member of the American Philosophical Society.

WE hail as a movement which is destined to exert a most potent influence in improving the moral, intellectual and social condition of man, the efforts now making by distingushed members of the medical profession to diffuse among the people information relating to the laws of their own systems, and the influence of diet and other agents in promoting comfort and existence. The mind is just awaking to the importance of this subject, comprehending, as it does, the most interesting considerations, for it is now rendered almost demonstrable, that a very large class of the affections of the system which interfere most with human happiness and enjoyment, are dependent on its derangement, arising from transgression of those laws which are laid down for the government of the body, and which are as fixed and invariable as those which rule the planets in the vast regions of illimitable space, or binds them in their orbits to obey the commands of the great governor of the universe. The transgression of these laws is inevitably followed by punishment; it may be slow in exhibiting itself; the transgressor flatters himself that he has escaped with impunity, but he finds to his cost his fatal error; slow chronic disease is lighted up which smoulders unnoticed in the system until important organs are crippled and so materially deranged, that the wheels of life clog heavily on their course, and by an accumulated retardation gradually yield to the disorganizing influence, until they are arrested forever. But let it not be supposed that ample and sufficient warning has not been given during the whole period, the preservative principle of the system which ever watches over its integrity, had raised the voice of caution, first in the gentle whisper of the slight uneasiness which was disregarded in the calls of business or of pleasure, then in the more urgent tones of pain increasing louder, and more emphatically its warning, until being yet unheeded, so serious a condition of the system is produced, that it overmasters all other considerations. Then suffering, and anguish, and anxiety absorb the whole being, the delights of pleasure, the value of wealth, or the rewards of ambition sink in his view, and health, alas, never truly valued until lost forever, becomes in his eyes the jewel of great price, to procure which, he would indeed be willing to sell all his possessions. Then does he spend wearisome days and tossing nights in unavailing regrets, at having so cruelly neglected the warn-

ings of the faithful sentinel. Then does he apply to the members of the medical profession, but too often their best skill can only sooth and palliate his sufferings. Often disheartened, he goes through the whole range of fashionable medication. The fountains of health, north and south, are faithfully visited, or the whole class of empirics are tried with a fidelity and earnestness deserving of a much better reward than is usually the result. It is time, full time, that the public mind should be disabused of an important error, that of relying too much on specific remedies in organic diseases. Let a general knowledge of the laws of the human system be diffused among the people, and the influence of diet and other agents which exert their power over the system, and the way is prepared for an important reform, destined to exert a most happy influence over the well-being of mankind; then will the members of the medical profession be applied to as advisers against the approach of disease; and science and skill called into action when they may be eminently useful, and not delayed until brought in as a last alternative to palliate the feelings of the friends, that at least all was done that human skill could exert.

No medical man in this country has applied his acknowledged powers of mind, and the stores of sound learning more faithfully, or to a better purpose, than the author of the work now under consideration; as the principal editor of the Journal of Health, a work of great value, and which was a loss to the community, when owing to causes not under the control of its editors, it stopped. He exerted a great and salutary influence through the columns of this periodical, which circulated by thousands over the Union. The doctor has been unwearied in bearing his part in the various plans for the improvement of the moral and social condidition of his countrymen, carrying into active practice the principles inculcated in his writings; the present work is still further carrying out the principles advocated, and embraces an amount of matter well worthy of the attention of every member of the community.

He directs the importance of attention to the public health, refers to its value in the opinion of the legislators of various nations in all ages of the world, alludes to the influence of liberty and civilization in increasing the mean duration of life, gives a very interesting and classic account written in graphic style of the food of various nations, examines the statistics of intemperance in various countries, devotes several chapters to a detailed consideration of the various kinds of food, vegetable, animal and mixed; to the subject drinks, water, alcoholic and intoxicating in general. In this important division of his subject, the author comes out in plain terms, and calls things by their right names. Having been cognizant of the progress of the temperance cause in this country, having stood by its banks and considered that dark river of crime and misery and death which threatened to inundate in one common ruin every thing valuable in our land. He is inspired to cry alound and spare not, under a stern impulse of duty he raises the warning voice, for from his profession and his attention to the details of this subject, he has grasped the whole mass of human misery that has been produced by it, and he feels it a solemn duty of every true patriot, philanthropist and christian, to do all in his power to offer his time, his talents, and his influence on the altar of his country, to arrest this fearful and desolating evil.

The work is concluded by a most important chapter on longevity, causes favor-

able and unfavorable to its production, such as physical education, the influence of the passions, temperance, early rising, sex, age, race, climate and locality, occupation, mortality in different nations; such is a rapid analysis of the heads contained in this work, with the considerations naturally rising in the mind connected with it.

We would recommend it to the perusal of all, whether of the profession or of the community in general; so far as our influence extends we give it, but the works of this author, medical, &c. have become generally known in this country, for sound learning, good sense, useful knowledge, that his name alone is a far better recommendation to a work than any influence that we can exert to give reputation where it has already been so well won by years of patient toil and persevering application, affording another noble example for the encouragement of the younger members of the profession, of perseverance under difficulties, and as a living proof that although clouds and darkness may obscure the early dawn, yet a light sky and glorious sun will burst forth on the meridian of life. Such lessons are most precious in the history of the human mind, and deserve to be cherished and held in the memory of all.

"First Principles of Medicine, by Archibald Billing, M.D. A.M. First American, from the fourth London edition. Revised and improved. Philadelphia: Lea & Blanchard, 1842."

This work has been sent from the press without any index or table of contents, which at first thought, appears strange enough, and inclined us to think the author was not a successful "book-maker." He has not given us his entire reasons for this, but it is evident, from his allusion to this omission, that it was not done through inadvertence. And after perusing the volume, his reasons will be apparent to every reader. The author says: "I was originally led to publish this treatise by a recollection of the difficulties I had met with in the study of my profession, and by the hope that I might aid in removing them from the path of others," and we hesitate not to say, that a careful perusal of this book will materially assist in clearing up difficulties which are met with and complained of daily in the practice of medicine. We cannot do more than give a hasty remark upon the points of the author, or make extracts of such matters as may be particularly prominent in the work.

He commences by urging the knowledge of physiology as absolutely necessary to the comprehension of diseased actions, and gives "a general idea of the apparatus which supports the life of man, &c. the primæ viæ, absorbent vessels, heart, blood-vessels and nerves." He says: "The use of the bile is to unite with and separate the feculent parts of the chyme, as white of eggs is used to clear wine." We do not intend to controvert this idea, nor to argue the question whether the chyle, separated by the bile as just explained, is kept in contact with the coats of the bowels by the rolling effect of the peristaltic action of the intestines, while the feces are, by the same motion, made to occupy the centre of the alimentary mass, (page 27).

In reference to the agency in nutrition and renewal of parts our author thinks "the processes, when examined, will be found to be chemical *precipitations*, by which new matter is deposited, and *decomposition* by which old matter is separated and then carried off by absorbents," &c. (page 29).

Reference is made to the microscopical researches of Schwann and Ehrenberg to prove that the middle coat of the arteries is not muscular, but composed of elastic tissue similar to that of the ligamentum nuchæ of the vertebraæ or the ligamentum flavum of the vertebræ of man, (p. 33). It is denied that the heart has "an active power of dilatation," by which it helps to refill itself, and it is insisted upon that the sounds of the heart are produced, not by its muscular contractions, but by "the sudden tension of its valves," (pp. 34, 35). The author is at issue with many physiologists, as Richerand, Magendie, Bichat, Hope and of our own countrymen Robinson and Fitzgibbon, upon the active dilatation of the heart; and although able men oppose the idea of the valvular doctrine, still it appears daily to be gaining advocates.

The moving powers of the circulation are stated to be "the contractile force of the heart, gravitation, and the tendency of fluids to RETURN to their own level," (p. 38).

Nerves.—Dr. B. supposes the cineritious (grey) part of the nervous system to be the generator of the nervous influence, which is conducted by the medullary (white) part; "the medullary part in the spinal cord and brain being an aggregation of nerves from the frame," and he is led to believe that the nervous influence is analogous to, if not identical with, the electric principle, whatever that be, (p. 39.)

From page thirty-nine to forty-four the author considers the subjects of organic sensibility, contractility, &c. and refers the whole round of those phenomena to nervous agency, and not to any inherent property of the tissues: from this he passes to the consideration of inflammation and congestion, in which he shows that the capillary arteries are weaker in their action, for the action of arteries being contraction, they, being larger in inflamed parts are less contracted, that is, act less. He contends that the enlargement of such vessels is not from increased action, but from their action being diminished, their giving way and being dilated by the injecting force of the heart. "The way to diminish the inflammation is by increasing the action of the arteries, as by cold or astringents, which make the arteries contract, that is, increase their action." The motion of the blood is shown also to be slower in those vessels, and the ratio medendi is, to increase their action, or if we fail in this to diminish the force and volume of the circulation by depletion or by digitalis, &c. "Inflammation and congestion are but varieties of distended vessels," the difference between them is, that in the latter "there is rather distention of vessels," in the former "there is more or less alteration of tissue, connected generally with deposition, in some way, of coagulable lymph," (page 48.)

Although Bichat does not admit the influence of the nerves in secretion, exhalation and similar processes, yet our author is convinced that "the capillaries, which are the agents of these functions, derive energy from the nerves," (p. 51).

The subject of secretion in pathological conditions of organs and tissues is considered from page fifty-four to sixty-eight, and some exceedingly useful and

interesting instructions are imparted relative to the modus operandi of local applications to wounds, ulcers, &c. and "the difference between support and pressure" explained. It is contended that when "the life of a portion is destroyed" it separates from the living part, not by the absorbents of the living part removing a portion of the dead, as many suppose, but separation is brought about by decomposition.

From page sixty-eight to seventy-seven, ulceration, suppuration, effusions, &c. are considered, and some judicious cautions and directions given as to the use of opium in (or as the author contends, after) inflammation. He alleges that effusions of lymph, serum, &c. are indications of abated inflammation, and are evidences of, what anciently was termed, the vis medicatrix, endeavoring to repair the damages of inflammation. The remarks in these pages are practical and full of interest.

From page seventy-eight to ninety-one the subject of chronic inflammations is considered, including tubercles and tumors, cancerous, scrofulous, &c. Allusion is made to hydrophobia, which, (it is "hazarded as a speculation") hereafter will be remedied by some medicine that will subdue neuritis. The author's inclination would be to "try as much arsenic as the constitution would bear, combined with plenty of opium, which always enables the patient to take more arsenic than he could without it." In a note, (p. seventy-eight) the controlling influence of opium and its utility in cases of arsenic poisoning, are demonstrated. Upon the subject of the disappearance (absorption, as many call it) of tumors, our author entertains views somewhat peculiar, yet ingenious. Duparcque in his work on diseases of the uterus, gives a beautiful and excellent theory of the operation of the "cura famis" and other means in bringing about the removal of tumors and morbid excrescences, which does not comport with the doctrine here taught. But we must not forget our determination not to controvert any point with the author, and therefore proceed to notice the remedial means to be used, if the efforts of nature do not accomplish the removal of the tumor. These are PRESSURE, which keeps the nutritive humors from entering its vessels; cold, which causes the vessels to shrink, and is valuable where pressure cannot be borne; LOCAL DEPLE-TION by leeches, &c. ARTIFICIAL DISCHARGE; and medicines, such as MERCURY, IODINE, &c. "which make the inflamed capillaries contract, independently of the vis a tergo or quantity of circulating fluid." He joins issue with Marshall Hall upon his views of irritation and inflammation, and says "he (Dr. B.) cannot tolerate his (Dr. H's) perversion of the term "diagnosis by bloodletting," although the author gives Dr. Hall much credit for what he has written on the physiology and pathology of the nervous system, &c. The operation of mercury and iodine is also explained.

The author (pp. 89 to 91) shows that "in reality there is no such thing as a specific" medicine, and explains how some remedies are useful in such a number of diseases. He believes in the animalcular cause of itch.

The further consideration of nervous influence, occupies pages 91-2-3.

Pages 93 et seq. are occupied with the consideration of the distinction between stimulants, sedatives, narcotics and tonics, and a fund of useful and important matter is embraced in these considerations. The author shows himself to be a very careful observer and a judicious prescriber. In defining the term "sedative" we

are "not to understand that which puts to sleep, which is the operation of a narcotic," &c. but that which diminishes the action of the heart and other organs by repressing the nervous influence. Among these are enumerated digitalis and green tea. He denies the doctrine "that no sedation is direct, but only a secondary result," and confirms his position by good arguments.

In speaking of the narcotic principle of drugs, the difference between these and stimulants on the one hand, and sedatives on the other must be clearly remembered. The author's remarks upon the practical application of narcotics alone or in combination, must be read to be fully appreciated; we do not know how to compress them and still do justice. From page 107 to 115 the author speaks of tonics which "neither immediately nor sensibly call forth actions, like stimulants, nor repress them like sedatives, but give power to the nervous system to generate or secrete the nervous influence by which the whole frame is strengthened." In the course of these remarks the author shows that tonics are not stimulants; why they may be combined with sedatives, stimulants or narcotics; and under what circumstances stimulants, sedatives, and narcotics are tonic; subjects fraught with the deepest interest to physicians, and the only regret we feel is, that his remarks are not more extended.

The more common phenomena of inflammatory affections and the remedies applicable to them, are next examined, and an explanation given of the apparently contradictory assertion that the distended state of the capillaries, at one time produces an increased flow of mucus, and at another dryness; the principles regulating the treatment of catarrh, bronchitis, &c. are also laid down. He enters somewhat extensively into the doctrine of irritation (to which term he objects, and for which he substitutes morbid sensibility), to which, propagated from an inflamed part, he ascribes the raising of the pulse. He agrees with the German physiologist Müller, that the sympathetic nerve is only the nerve of vegetative or organic life, presiding over the functions of secretion, nutrition, &c. and, apart from the motor and sensitive twigs which accompany it, has nothing to do with sensation or muscular action, (p. 134).

Further on, the author says: "there is no difference between PHLEGMONOUS and ERYSIPELATOUS inflammation: it is the same inflammation in both cases; the difference is in the degree or situation, and depends on the state of the constitution," (p.152.)

In the consideration of morbid sensibility, are included those functional derangements of organs sympathizing with a distant one, such as hysteritis producing colic, pains in the loins, hips, &c. and especial reference is made to the influence of the kidney on the stomach, simulating cases of dyspepsia, &c.

In a more aggravated degree of this "morbid sensibility" we have symptomatic fever from local inflammation; nothing special is mentioned here.

Next is considered a still more aggravated degree, when "after the foregoing state has existed for some time, the power of the nervous system becomes exhausted by morbid sensibility, want of nutrition, &c. and when the heart, though still under the influence of sympathetic morbid sensibility, \* \* \* \* has less power to contract, and really becomes weaker, the pulse though still hard is rendered weaker also," &c. constituting typhous fever, (p. 162.)

From this he enters upon the pathology of fevers and their treatment: every

page is replete with evidences of great discernment in the author and full of valuable truths for the reader. The peculiar views of Broussais, Rasori, Tommasini, Frank, Stieglitz, Hamilton, Armstrong, Clutterbuck and others, are in part or wholly noticed, and in his remarks he shows, "how every medical man has his hobby to carry him to the same point, which, though he thinks it very different from his neighbor's, is as like it as one four-legged jade is to another." He urges the necessity of avoiding stimulants as much as possible in typhus, and very satisfactorily shows the error of the Brunonians on this point. He devotes sufficient attention to local phlegmasiæ as concomitants of fever, and discourses very ably in reference to them.

He explains the manner in which saline, antimonial and other sedative medicines and means such as cold externally and bleeding, are beneficial in fevers both where the pulse is too strong and where it is too weak and rapid. "In both cases, sedatives by repressing the expenditure of nervous influence, cause the heart to struggle less and take repose. At the same time the action of the capillaries throughout the frame being increased, by the constringing property of the sedative circulated to them, the nervous system recovers power." He strongly advocates antimonials and salines conjoined with bloodletting in some form. Several interesting and instructive cases are introduced to exhibit typhus petechicalis, and the prompt relief afforded by contra-stimulant treatment. Were we to do justice to this part of his subject, we should be obliged to transcribe literally, as he could not be made intelligible by any abridgment of his text. These subjects occupy him to page one hundred and ninety-nine, where he mentions as the conclusion of careful observation "that there is but one SIMPLE fever, and which is exanthetous, petechial, though the rash may never be sensibly developed, as in scarlatina maligna; that it is continued, synochous (synocha, συνέχω), whether with high or low pulse, high or low temperature; and that when the sensorium is oppressed in addition, (page 163 note) it is typhous (typhus)."

Next comes the consideration of the NEUROSES. It is asked "why one gun-shot wound of a limb should produce fever, and an apparently exactly similar one, locked jaw?" and the question is solved by "the difference depending upon whether the cineritious or medullary part be principally affected; fever consisting of congestion of the former, tetanus of disturbed action in the latter—the state of morbid sensibility (neuritis)? p. 206. The necessity of distinguishing well between fever and general morbid sensibility is pointed out and some examples, occasioning embarrassment to the incautious practitioner, are introduced, as for instance, the excessive abdominal tenderness succeeding some accouchements which might be mistaken for puerperal peritonitis, (207). Hysteria, tetanus, epilepsy, neuralgia, delirium tremens and general morbid sensibility, are passed in review and some pertinent cases presented to the reader, from which the following points were illustrated: 1st. Local inflammation producing morbid sensibility and symptomatic fever; hence food and wine afforded no nourishment, narcotics no rest (as they would have done, had there been only morbid sensibility without symptomatic fever). Cured by a sedative, digitalis.

2d. Local inflammation producing, not fever, but general morbid sensibility, chiefly evinced by loss of sleep; no indications for stimulants, sedatives or tonics, and no want of strength or appetite. Cured by a narcotic, which, by procuring

sleep, gave the nervous system time to regain its natural state, so as subsequently to give energy to the vessels of the inflamed part.

3d. Local affection (chronic hysteritis) having produced, not fever, but constitutional morbid sensibility-hysteria; debility arising from depletion and want of nourishment; narcotics could procure but temporary relief, as they afford no nourishment and sedatives aggravated the delirium of inanition. Stimulants and food, by giving strength acted as a tonic, and restored power to the nervous system, and consequently to other parts, &c. &c. (pp. 221-2).

"Morbid sensibility," it is remarked, "is an affection of nerve; but nerve, considered in relation to disease, is nothing without capillaries—capillaries nothing without nerve. The isolated consideration of either leads to error," &c. Some trite remarks are made upon apoplexy and paralysis, and valuable suggestions presented upon their treatment. In the course of the volume it is supposed to have been shown: 1st, "That the substances which are stimulant to the heart, relax the capillaries when locally applied to them, and consequently are not local stimulants; and vice versa, those which contract the capillaries diminish the action of the heart; 2d. That there is an analogy between muscular and electric, capillary and galvanic action. In electric and galvanic phenomena the agent is the same, yet how different both in the action and in the mode of production and distribution! the one being sudden, requiring a freedom from damp, the other needing moisture for its production; as the galvanoid action of the capillaries is increased by the agents which will stop and destroy the action of the heart and other muscles, and vice versa. Substances which produce the electroid action of muscles, and are hence named stimulants, weaken and even annihilate the galvanoid action of the capillaries."

Having discussed the nature of the two grand groups of diseases which constitute fevers and neuroses, and having shown that although they both are essentially affections of the nervous system, yet they are widely different from each other, the author adds: "all diseases commence as I have already said, by disturbance of the function of solid parts of the machine; and first of all, of the nervous system. This is solidism or neuro-pathology," (pp. 227-8).

The diseases subsequently discussed are ague, cholera and influenza; erysipelas and rheumatism; and the diseased states of the capillaries which produce catarrhs, dropsy, hemorrhages and chronic cutaneous eruptions.

Ague is represented as constituting the link between fevers and neuroses, and the relationship of many of the phenomena of ague to Asiatic cholera is shown with much clearness and satisfaction. Interesting facts in reference to the "constitution of epidemics" are stated and parallels between diseases run out, giving an extraordinary degree of interest to the subject. Whoever recollects the mournful history of the choleric epidemic in our own midst, and recalls the doubts and conflicting emotions of that period, cannot but be interested in the judicious observations of our author upon this matter. He justly counsels young practitioners not to have their ideas narrowed down by names and shows that nosologists have separated, what nature never designed should be "put asunder." We must hurry on.

A few directions for junior readers are given as to the treatment of rheumatism. 1st. Bleed in acute rheumatism (rheumatic fever) if with a plethoric appearance, you have external redness and tenderness, combined with oppression at the chest indicating tendency to pericarditis, or if there be symptoms of meningitis.

2d. Do not bleed, unless emetics and other treatment have failed, if there be only external pain and swelling and the patient not strong, lest you have a slow convalescence.

3d. But always have the fear of internal inflammation in your mind's eye, or you may have no convalescence at all, but death for want of bleeding. If the patient gets severe pericarditis, you will either have death soon with fever, in neglect of bleeding, or a lingering death from adhesions and enlargement of the heart with dropsy.

4th. Always examine the chest whether complaint is made or not,—the external pain often causing the non-observance of the internal, (pp. 252-3)

ERYSIPELAS, the author says, is not produced by cold air, unless the part have been previously warm and damp. After descanting upon the subject of erysipelas for six pages, the author sums up "here in two words is the epitome of the treatment of erysipelas—emetics and tonics."

DROPSY is inflammation or congestion, the proximate cause of the acute or chronic being the same. It is denied that "it is necessary to refer, as many do, to a diminished action of the absorbents as a cause of dropsy. Dropsy is most frequently not a primary disease, but a symptom, &c. and our great object must be to cure the disease which produced dropsy.

Upon the subject of AMENNORRHŒA and the MIMOSÆ, much useful advice is given and a very true portrait sketched. Here, it is remarked, are exactly the cases that have brought homœopathy into some credit; yet the author has seen some nearly destroyed by the homœopathic treatment. Don't be uneasy, reader, he does not mean by the medicine, for that he says can do neither harm nor good, but by injudiciously low diet inducing a debility by which disease has gained ground.

From 269 to 290 CATARRH and PHTHISIS are spoken of and an amount of profitable matter afforded to repay a diligent perusal. We can only refer to it thus:

The author believes it perfectly useless, as far as treatment is concerned, to make any further division of chronic cutaneous diseases, than into the papular, scaly, pustular and vesicular. The co-existence of disease in the external and internal rete mucosum, has been universally observed. The author says: "I defy any person to apply remedies for cutaneous diseases with any degree of precision by the directions of Willan or any of his successors." Directions are given how to use tonics as iron, mercury, arsenic, sarsaparilla, mezereon, dulcamara, antimony, &c. &c. Alkaline washes are useful to excite the relaxed vessels of the skin, but require great varieties of dilution, &c. A judicious, rational system of treatment is given, based upon physiological and pathological principles, which if understood and acted out, will give more satisfaction, than the ordinary off-hand, specific plan.

The book is concluded thus: "and I have only to add that, in applying remedies, though not a moment should ever be lost, we must have patience in allowing them to act; and that, though inert practice is mischievous, the safety of the patient depends upon nequid nimis." In this volume of two hundred and ninety-six pages is compressed a vast fund of useful knowledge, expressed in a simple,

unostentatious manner, and however much we may be disposed to differ from the author upon more than one subject, we venture to say that every one, after having perused the volume dispassionately and without mental bias, will be repaid fully for his time and trouble.

K.

[We recommend our readers to avail themselves of the opportunity of obtaining this excellent work. It may be had in this city of Cushing & Brother, Market st. opposite Hanover street.—Editors.]

On the Structure, Economy and Pathology of the Teeth, with careful instructions for their Preservation and Culture; and concise descriptions of the best modes of Surgical Treatment, &c. &c. By William Lintot, Surgeon, Surgical and Mechanical Dentist, with upwards of forty illustrations, 12mo. pp. 114. London, 1841.

This is a very well written and handsomely gotten up little volume. It is divided into eight chapters. The first treats on "the anatomy and structure of the teeth," "structure of the ivory," "enamel," "cementum," "chemical composition of the teeth," "anatomy of the pulp," "arteries, veins," and "nerves," the "articulation of the teeth," the "alveolar processes, anatomy of the gums, tartar glands, mucous," and "salivary" glands. The second chapter treats on the "development and growth of the teeth," "number of the teeth," "temporary teeth," "formation of the teeth," "growth of the teeth," "membranes of the teeth," "number of the permanent teeth," and the "position, form and use of the teeth." The third, is devoted to the "ordinary diseases of the teeth and gums," which are treated on under the following heads: "tooth-ache and its causes," "decay—its origin," "its exciting" and "constitutional" causes; "the effects of mercury," "mechanical injuries," "lateral pressure" and "erosion." In the fourth, are pointed out the "remedies, against decay, mode of treatment conducive to" the "preservation" of the teeth, followed by some remarks about "dentists, and their charges," "empiricism," "rules for the care of the teeth," "operation of stopping or filling the cavity," "materials" proper to be employed for that purpose, "preparation of the cavity," "introduction of the stopping," "division by filing," and "cements and the cases wherein they may be useful." The fifth chapter is devoted to the consideration of the "diseases of the gums and alveolar processes," which are treated on under the heads of "scurvy," "tartar and its effects," "mercury," "abscess," "tumors," "indigestion" and its "effects." The sixth, treats on "irregularity of the teeth," "shape and growth of the maxillary bones," "absorption of the fangs of the temporary teeth," "removal, period for," "mal-formations," "mode of treating irregularity, by extraction," "capping, by bar, ligatures, and screws," and the "period for treatment." The subjects embraced in the seventh chapter are, "extraction," "sufficient cause for," "effects of," "instruments," "key," "forceps and elevators," "exostosed and anchylosed teeth," and "lancing of the gums." The eight and last chapter, treats on the "restoration of the teeth," the circumstances under which "artificial teeth become necessary," "modes of restoring lost teeth," "a single tooth in front," "mastications," "hippopotamus ivory," "capillary attraction and atmospheric pressure;" "gold plates," "ligatures," "removal of stumps," "causes of failure in the attempts to restore the power of mastication," "selection of mode and material," "cheap teeth," "natural teeth" and "mineral teeth."

In treating upon so many subjects in so small a volume, the author's remarks upon each are necessarily restricted to very narrow limits; that his reading has extended beyond the works devoted exclusively to the science of dental pathology, is very evident, and from the views advanced by him in the work before us, we should judge that he is better versed in the theory of general medicine, than in the practice of the branch which he has undertaken to teach. While many of his opinions differ from those entertained by scientific dental surgeons of the present day, we were unable to discover, from the hasty perusal which we gave his work, any that were entirely new.

His opinion concerning the pathology of dental caries, presupposes the structure of dental bone to be tubular and non-vascular. His theory is ingenious, but after all not very different from that advanced by several of the older writers, among whom, are Fauchard and Auzebi. He says: "my own opinion with regard to the formation and decay is founded upon the endosmotic phenomena which I suppose to be taking place in the structure of the tooth. Thus, as no bloodvessels are traceable into the texture of the ivory, I conceive that the animal part of this structure derives its nutrition from the colorless liquor sanguinis imbibed by the tubuli from the vessels of the pulp. This mode of nutrition is seen in various tissues of the body, as for instance in cartilage, in the cornea, &c. That the tissue of the body is imbued with fluid, is evident from its solidity and color; and also from its difference of weight in the fresh and dried state. This fact may be easily illustrated by immersing a dried tooth in water, when it is observed to absorb a considerable proportion of the water, and become materially changed in its density.

"Now I think that I am warranted in inferring, that the nature of the fluid permeating the tooth from the vessels of the pulp is, in the normal state of the system, always similar.

"On the other hand, the crown of the tooth may be regarded as being immersed in the salivary fluid by which it is constantly surrounded, and, as we know, this fluid undergoes a change from alkaline to acid by simple exposure to the influence of atmospheric air within the mouth. Again, from containing a large proportion of nitrogen, the saliva is constantly subject to a change in character from decomposition; and, lastly, the fluids of the mouth are obviously very much affected by the state of the stomach, and disease of various kinds."

Now in the above statement we have the precise conditions which are best calculated to induce an active endosmosis; an alkaline fluid contained within the tubular texture of the teeth, and acid fluid externally, the two being separated by an animal tissue. To question the existence of endosmosis under such circumstances would be to dispute the first principles of physiological science. But what, asks my reader, are the results which I deduce from my positions? They are important, and the following: In the first place, it is by this process that the color of the teeth is altered in disease; that they become yellow and discolored during illness, by the transudation or endosmosis of discolored and morbid fluids.

And by the same process they are capable of regaining perfectly their original and wonted whiteness.

"Secondly, I regard this endosmosis as the means by which the calcareous matters are first dissolved, and secondly removed in a state of solution from the tubuli, leaving behind only the animal texture of the ivory, and thus establishing decay. I may be asked why, admitting my proposition, the decay should be localised to a single spot? Why should not all the tubes be affected similarly and simultaneously? My reply is, that the part most likely to be attacked, and that which, under the above circumstances I believe to be affected, is one which is already placed in a morbid condition, either by imperfection of development, or by injury to the tubular structure from pressure, &c.

"The first indications of the existence of decay of the ivory of the teeth, is a slight discoloration, which is perceptible through semi-transparent enamel.

"Decay progresses much more rapidly in some individuals than in others. The bone becomes softened by the removal of the earthy or calcareous part, leaving the organic of animal part behind, and is destroyed in a direct line from the surface towards the centre of the tooth, in the course of the tubuli. The base on which the enamel rested is thus removed, some accidental pressure in masticating bears upon the spot, the enamel breaks down, and a cavity is suddenly found to exist in what had probably, hitherto, been deemed by the unsuspecting owners, to be a sound tooth."

That Mr. Lintot is mistaken in regard to the nonvascularity, (of the teeth) the microscopic view of the tooth contained in the last number of our Journal, proves beyond the possibility of doubt, and in regard to the decay of the teeth being the result of an endosmosis, we think it can be much more easily accounted for by his own showing. The readiness of the fluids of the mouth to unite with the oxygen of the atmospheric air and become acidulated, satisfactorily accounts for the decomposition of their calcarious ingredients, or in other words, their decay. That it is in this way that the decay of the teeth is produced, is conclusively shown by the fact that dead teeth are as liable to decay as living ones. That teeth, after having become discolored throughout their substance, ever recover their original whiteness, as is asserted by our author, we are assured that they never do. As it regards any influence that can be exerted upon the bone of the tooth by the pressure upon the enamel, it is unreasonable to suppose, from the unyielding nature of this substance, that any could in that way be produced.

The material which he recommends in most cases for filling teeth, is gold. He should have recommended it in all, for if a tooth is worth being filled at all, it is worth being filled with the best article, and in the best manner, and we were sorry to find that in some cases he advises the employment of a cement consisting of an amalgum of mercury and silver. We believe this article to be not only valueless as a preservative to the teeth, but absolutely hurtful. We have heard of many instances where teeth have been greatly injured by its use, and in some where they have been destroyed. Almost every dentist, we believe, who uses it, disguises it by a name to suit his own peculiar fancy. It is designated by the various appellations of "mineral cement," "metallic paste," "lithodeon," "succedaneum," "marmoratum," &c. &c. but these, we are informed, are all essentially one and the same, and we would have no confidence whatever in the skill of any

dentist who would use it. By all scientific dental practitioners, we understand, its employment is deprecated, and no doubt Mr. Lintot, had he have had as frequent opportunities of observing its injurious effects as some of our American dentists have, would have spoken less favorably of it. We trust that this species of dental empiricism is nearly at an end.

H.

An Exposition of the unjust and injurious Relations of the United States Naval Medical Corps. By a member.

"There are more things in heaven and earth, Horatio,
Than are dreamt of in your philosophy."
Printed by John Murphy, Market street, Baltimore, pp. 22.

THE object of the present publication is to unveil and expose long existing errors in the regulation of the medical corps of the United States Navy,—"to show, that by the usages of the sea service, this corps is placed in a position inconsistent with the arrangements and intentions of the government in relation to it, degrading to the character of the profession to which it belongs, opposed to the true interests of the corps, and to the interests of the service in general, so far as those interests depend on the medical department."

The author introduces the subject with a review of the qualifications as regards education, general and medical, and the moral standing required of the medical officers of the navy, and we take pleasure in doing an act of justice to them by asserting thus publicly, that the medical officers of the navy and army of the United States, as regards their professional qualifications and their character as gentlemen, deserve the highest commendation. This we have found true to the very letter, of all those with whom we have had the pleasure of an acquaintance.

The grievances complained of by the medical officer, are, the want of appropriate quarters—the quarters assigned to the assistant surgeon, "the narrow limits of the steerage, crowded with boys about entering their nautical education; full of fun and frolic and merry with the noisy hilarity of youth." There is no place for retirement and study.

Another grievance is the want of rank, so that the medical officer is obliged to submit to certain indignities and the exclusion from privileges which are deemed of special value in naval life. These grievances he must submit to for many years, and even when promoted to his full rank as surgeon, he has not that recognised station or privilege which his knowledge and age entitle him to. A comparison is drawn between the surgeon of the army and navy, showing "that assistant surgeons in the army, receive more pay, than a surgeon of ten years standing in the navy, although the naval surgeon may have been twenty years a commissioned officer."

It is stated that the British government fosters the medical department of its navy, with care proportioned to that of every other branch of the service, and by an order in council issued 1840, it is assimilated in rank, designation, pay and retirement, to the scale of the army medical department.

There are other grievances alluded to which demand remedy. But what are these remedies? They may be summed up in a few words. To assign the assistant surgeons a position consistent with their character, age, and profession—to

define as has been done in the British service, the rank and privileges of the medical corps in general; and lastly, that medical officers should compose a part of the court before which a medical officer is brought for trial.

We have thus rapidly reviewed the "Exposition," which every one who feels interested in the medical corps of the navy, should purchase. We rejoice that this voice has been raised in defence of the just rights of this valuable class of men, and we are much mistaken in the feelings and views of the high minded and distinguished personage who now controls the navy department, if in his desire to advance the true interests of that service he does not introduce reforms, so loudly called for, by every principle of expediency and justice.

To the author of the "Exposition," we think, that his brethren not only of the navy, but of the profession in general, are under obligations for this manly and able vindication of their rights, and we unite with him heartily in the sentiment,—"Fiat justitia ruat cælum."

Vol. II.—No. 3.

9

# FOREIGN INTELLIGENCE.

### ANATOMY AND PHYSIOLOGY.

Illustrations of the Comparative Anatomy of the Nervous System. By Joseph Swan. Part VII. (Last.) Price 7s. London, Longman & Co.

Cerebrum and Cerebellum in Animals.—Mr. Swan tells us that the brain is more or less spherical or lobulated in all animals; in man, at the upper part of its hemispheres, there is an extensive fissure, and one more or less deep in many of mammalia; but in some of these and the other classes there is a very little, if any, separation. Convolutions answer a particular and not a general purpose; they are very deep in man, and some of the mammalia; but in others and the several inferior classes they hardly exist. The great commissure is very extensive in man and such of mammalia as have the hemispheres high and large; it faintly exists in others, in which the lobes only just inclose the lateral ventricles; it is not present in the three lower classes. Ventricles vary in all the classes; the lateral has a posterior horn in simiæ proportioned to the posterior lobe, so that in some it is a mere chink; in birds it extends more posteriorly, at which part its parietes are very thin; it is placed anteriorly in amphibia and fishes. The third ventricle lies between the thalami in mammalia and birds; in birds it extends into the optic lobes; in amphibia and fishes it is continued from the same surface with the lateral. The fourth ventricle exists in all; and in birds, amphibia, and fishes, extends into the optic lobes and cerebellum. The transparent septum exists in mammalia only; in birds, the striated septum supplies the place of it and the great commissure. The former exists in mammalia only, in birds, the floor of the lateral ventricle supplies its place. The great hippocampus exists in mammalia but not in the other classes. The striated body exists in the three superior classes; in mammalia it is similar to that in man, but very different in birds and amphibia. thalamus exists in the three superior classes, but is very small in amphibia. soft commissure depends upon the presence of each thalamus; it is very tough in the turtle. The anterior commissure exists in the four, the posterior in the three superior classes. There is a pineal gland in mammalia and the turtle. The quadrigeminal bodies are distinct in mammalia, but vary, the nates being either larger or smaller than the testes, they are solid at birth; in birds they are flattened and large, and have no distinction like that of the nates and testes, and contain a ventricle in each communicating with the third; they also exist as hollow bodies without any anterior or posterior separation in amphibia and fishes. The base of the brain is divided into lobes in man and simiæ, but in most others there is very little, if any, distinction, the pituitary gland exists in the four superior classes. Two distinct mamillary eminences exist in man, but they are very generally conjoined in mammalia: they do not exist in amphibia, they are however not only present but separate in fishes. The cerebellum exists in the four superior classes; in the invertebrated its presence is doubtful; it has large lateral lobes compared with the middle, and is large in proportion to the size of the body in man and simiæ; the lateral lobes compared with the middle ones are smaller in mammalia generally; it is convoluted throughout; in birds, it consists principally of a middle lobe, to which is attached on each side a small one like the lobule appended to the lateral lobe of the monkey and other animals; it is convoluted, and has a ventricle; in some of the amphibia, as the turtle, it is hollow, in several it is a mere rudiment. In the cod, it has a small ventricle, and consists principally of a middle lobe; in the skate it has a ventricle, it has also lateral lobes which are somewhat convoluted. The annular tubercle is largest in man, it is proportioned to the size of the crura of the cerebellum; it exists in mammalia, the trapezoid body is a resemblance of the posterior part of it; it is not distinct in birds, and does not exist in amphibia and fishes; it is proportioned to the size of the crura of the cerebellum. The oblong medulla is larger in mammalia in proportion to the size of the brain than in man, but particularly in the other classes; small olivary bodies exist in the monkey; the other eminences in the four superior classes are more or less indistinct.

Spinal Marrow in Animals.—The spinal marrow is nearly the same in the four superior classes: in the invertebrated there is a chord or ring in the place of it, analogous to its nerves and ganglia; it varies either in breadth or length, according to the required motion of the spine, and the number and size of the nerves; it may be short and bread, or long and narrow, with enlargements in places from which larger nerves are to proceed: it may form a longer or shorter cauda equina. In birds it appears knotted, and has its dorsal part closely surrounded by bone, and has a lumbar ventricle; it reaches to the tail in birds, and generally in amphibia and fishes.

Smelling depends upon the olfactory nerve arising from the brain, and the fifth arising from the oblong medulla. The organ may be small or very capacious, branches analogous to those of the fifth may produce a rudimental sense in some invertebrated animals.

Seeing depends upon the optic nerve arising from the brain, and the third, fourth, fifth, and sixth arising in the track of the oblong medulla. The organ varies in size, but not like the nose; the ciliary nerves are not in proportion to the size of the organ, but to the required powers of vision. Although there is an optic nerve arising from the brain in some of the invertebrated animals, yet in many instances the organ is rudimental and the nerve analogous to the ciliary.

Hearing depends upon the auditory nerve, the fifth, the hard portion and the glosso-pharyngeal, which arise from the oblong medulla. The auricle and tympanum vary in each class, and in different kinds of the same in a slighter degree. The labyrinth is similar in mammalia except slight variations in the windings of the cochlea; it is further modified in birds, and still more in amphibia and fishes.

In fishes the auditory, or fifth, and glosso-pharyngeal are more conjoined for supplying the labyrinth; instead of the fifth and glosso-pharyngeal being confined to the tympanum and its appendages. In invertebrated animals the rudimental form of nerves may approach that of fishes and resemble that for the tympanum only in the higher classes.

Tasting depends upon the fifth, glosso-pharyngeal, and ninth, which arise from the oblong medulla. The organs concerned in its production are very extensive in many of mammalia. The nerves are proportioned to the organ and the oblong medulla, and not to the brain or cerebellum. Although branches of the fifth supply the mouth in the other classes, the glosso-pharyngeal appears to be the most important. In the invertebrated any sense of taste may have a rudimental condition approaching that in the three preceding classes.

Sensation depends upon the fifth and spinal nerves arising from the oblong and spinal medulla; the ganglia attached to them are variously constructed in different animals. The brain may be large or very small; the cerebellum may be large or rudimental. In invertebrated animals the nerves may proceed from the subceso-phageal ganglion and the prolongation of this in a chord or ring, or from ganglia having the least possible resemblance to a brain. It is probably modified by all these changes as well as by the extent of the convolutions of the brain. Under this head the following parts may be included: skin, teeth, bone, ligament, and those giving origin to horn, hair, and nails.

Voluntary Motion is under the third, fourth, fifth, sixth, hard portion, ninth, accessary, and spinal nerves, and the oblong and spinal medulla. In invertebrated animals the nerves may proceed from the subæsophageal ganglion, or from a prolongation of this in a chord or ring, or from ganglia having the least possible appearance of a brain; in many instances there is no difference in the dorsal and ventral surfaces of the chord or ring, and in the highest of this class there is not the same distinction as in the vertebrated.

Involuntary Motion is under the sympathetic, or such of the common motive as have their powers directed by the action of moving parts placed in contact or connexion with them: it is therefore principally under the influence of the oblong and spinal medulla.

Circulation.—The nerves promoting it proceed from the sympathetic and par vagum, so that it is principally under the influence of the oblong and spinal medulla. In mammalia and birds which have hot blood and a completely double circulation there is a large brain. In animals with cold blood, as amphibia which have not a completely double circulation, and fishes which have one still more simple, the brain is small and the cerebellum may be a mere rudiment. In invertebrated animals there may be a different form of the circulatory organs when the nervous system is similar.

Spinal Marrow.—It gives origin to the sensitive and motive nerves of the trunk of the body; its functions are very limited, independently of the brain. In invertebrated animals, a long chord or ring analogous to the ganglia and nerves of the spinal marrow and sympathetic exists.

Oblong Medulla.—It is required for all the vital functions, and for sensation and motion; the brain, cerebellum, and spinal marrow are not absolutely necessary; they nevertheless, according to their development, extend its powers. Only the two organs of smelling and seeing receive nerves directly from the brain, and they require others from the oblong medulla for the completion of their functions. All the other organs, not supplied by nerves from the oblong and spinal medulla, are indirectly connected with those parts through the sympathetic nerve. If the brain and cerebellum do not immediately promote the functions of the several organs, they complete the concatenation of faculties required in the more perfect creatures.

Brain.—Only a very small brain in proportion to the size of the body exists in some animals, and is principally for the senses of smelling and seeing, and for ministering to the intellect, and for this purpose it is fashioned with modifications of structure. According to the increase of the intellectual faculties, the hemispheres become larger in proportion to the oblong medulla. In invertebrated animals, its most complex state is inferior to that of fishes, and in many instances is so rudimental as scarcely to deserve the name.

Cerebellum.—Its condition may be a mere rudiment in some complicated animals, and increasing from this to its large size in man. The vital and instinctive functions, and those of sensation and voluntary motion, do not depend upon it.

Sympathetic Nerve.—It exists more or less distinctly, but with modifications, in the four superior classes; in the invertebrated, the functions usually performed by it are more conjoined with the rest of the nervous system. It is related to the spinal and oblong medulla, through the nerves arising from these parts.

Mr. Swan alludes to the soul, and to the instinctive essence. We confess that he does not succeed in clearing up the mystery surrounding them.

Grey and White Matter.—Neither the grey nor white matter can be discovered in every animal; but as they exist so extensively, they may be considered as one of the chief means of combination with the nervous element, and thus as a principle.

Shapes of the Grey and White Matter.—The grey and white matter require to be placed in a particular order, shape or form, and to be more or less intermixed with each other; and according to this elaboration are their powers varied and modified, either for general or particular centres. The more extended portions of the brain for promoting the intellectual faculties, and the more particular ones as centres for the origins of the nerves, are formed on an appropriate plan, and have their prescribed situation, but vary in some respects in different animals. The instinctive essence manifests its power differently, according to the condition of the structures through which it acts. The more elaborate the ranges of the fibres of the centres, and the construction of the several organs of the body through which the mind and instinctive essence are approached, the more exalted is the manner in which perceptions and the commands of the will are executed; so that, on account of the great development of the brain in man, the mind receives and imparts impressions, which the instinctive essence cannot. The

shapes may, therefore, be reckoned as a principle, as the modifications of the same determine the extent of many faculties.—Medico Chirurgical Review.

# M. Andral on Alterations of the Blood, with Comments on the Old Humoral Pathology.

The Bile.—Although much has been written on the diseases which the introduction of this secretion into the circulating fluids has been said to induce, we must remember that its actual existence in the blood has never been demonstrated by chemical analysis. One of its constituents (its coloring principle,) has been observed in the serum, communicating to it a green or a deep yellow hue: if nitric acid be added to such serum, its precipitated albumen also is usually more or less decidedly green. M. Martin Solon, in his work on albuminuria, has related four cases of pleuro-pneumonia, complicated with bilious symptoms, in which a green precipitate was induced in the urine, when nitric acid was added to it. After the use of brisk purgatives for a few days, the green coloring matter disappeared.

The Urine.—The same may nearly be said of this secretion as of the bile. It has never been detected en nature in the blood; but one of its elements, the urea, has been. Every one knows the interesting experiments of MM. Dumas & Prevost, who, after extirpating the kidneys in some animals, discovered the presence of a notable quantity of the urea in the blood. Such being the case, we might à priori infer that, whenever these organs perform their functions imperfectly, the urea may gain admission into the circulating fluids. Now such has been found to be the case in the morbus Brightii, or granular degeneration of the renal parenchyma.

The Milk.—Every medical man has heard of the "milk-fever," and many an old practitioner in the present day will still tell you that it is altogether owing to the introduction of this secretion into the blood. The results of chemical analyses, however, demonstrate that this notion is quite groundless. Some writers indeed have asserted that they detected the essential principle of milk, its caseum, in the blood; but the assertion is not credited by the best authorities.

What has been called a milky state of the blood has not unfrequently been noticed; but it is a curious fact that this phenomenon has never been found in the case of a puerperal woman. It is the serum of the blood that exhibits the peculiar milky appearance, that has imposed upon so many writers. MM. Trail, Caventou, and Christison have analysed such blood; but on no occasion have they ever detected any of the elements of milk in it. The peculiar appearance depends on the admixture of a certain portion of fatty matter, which forms a sort of emulsion with the serum. Such at least is the opinion of Dr. Christison; M. Caventou, on the other hand, attributes it to the presence of albumen somehow altered and modified.

We shall now notice some of those foreign matters, the products of morbid action, which have been occasionally detected in the blood. By far the most important of these is pus. It has been found in cases of—1, inflammation of the

parietes of the heart, arteries, and veins; 2, eruptive fevers, small-pox for example; 3, large abscesses, and then the pus penetrates by absorption, molecule by molecule; and, lastly, pus has been found in the centre of sanguineous coagula, which must have been formed during life.

When purulent matter gains admission into the blood, in some cases the two fluids become so blended together that the color of the latter is more or less changed; while in other cases it is found to be deposited in the form of minute insulated drops floating in the mass of the blood. In the former condition, the pus seems to act as a poison; for the blood is always found to have lost its normal consistence, its solid portion being unusually soft, friable, and broken down into small clots, and its serum being a veritable ichor. When pus and fresh-drawn blood are mixed together, the latter is found not to coagulate; as we have on a former occasion shown to be the case. The same condition of the blood, its uncoagulability, is induced by the introduction of various poisonous substances, whether of a vegetable, animal, or aerial nature, into the system. How these agents act is not at all understood; but the fact of their doing so in the manner alluded to has been known from the earliest days of medical science. M. Magendie has for some years past been prosecuting a series of experiments to illustrate the effects of the introduction of foreign matters into the blood in the production of disease; and he tells us that he can, at will, induce all the symptoms of putrid fever in dogs, &c., by injecting into their veins a putrescent animal fluid. We doubt however whether this be the right mode of arriving at any satisfactory conclusions.

"I have now finished," says M. Monneret, the reporter, "the accurate description of those important researches undertaken by MM. Andral and Gavarret. The question as to the nature of fevers, a question that has been so long agitated, has now received, not indeed a complete solution, but a bright light, which cannot fail to render many points connected with their history much more clear than they have been hitherto. It can no longer be admitted that any one should now assimilate typhoid fever with a genuine inflammation or phlegmasiæ; the marked differences as to the state of the blood in these diseases establish a well-defined demarcation between them. The partisans of the Broussaian school have not been satisfied with M. Andral's analysis of the blood, because they are not in harmony with their doctrines; but this mode of objection cannot be received, and the only way to overthrow his statements is to go over the ground which he has so diligently traversed." . . . . . "The alteration of the blood takes place very early in eruptive and typhoid fevers, and becomes more and more decided as the disease advances. We may confidently affirm that the change in the quality of the circulating fluid precedes, by a considerable period of time, any lesion of the intestinal mucous glands—the primary point de depart of all the phenomena of fevers, according to Broussais and his followers.

Let it be remembered that we do not mean to say that the change in the composition of the blood, although it is unquestionably anterior to the lesion of the Peyerian glands, is the cause of fevers; it is rather one of the earliest effects. We have not yet succeeded in detecting the primary link in the chain, and perhaps we never shall." (The docrine of the old physicians, that the miasmatic

poison of genuine fevers acts primarily on the nervous system, and subsequently on the blood, is probably the correct one.)

be careful not to separate it from the examination of the solids. Bichat's memorable saying, 'that every exclusive theory, whether of humorism or of solidism, is a pathological absurdity,' should never be forgotten. The great aim of the wise physician will be to strive to ascertain what share each of the two great elements of all organization takes in the production of diseases. Morbid anatomy has revealed a numerous catalogue of lesions of the solids; but as it has omitted to examine the changes of the fluids, the aid of analysis should now be called in to lead us to the truth." . . . . — Medico Chirurgical Review.

On the Structure of the Blood Corpuscle. By G. OWEN REES, M.D. Physician to the Northern Dispensary; and by Samuel Lane, Lecturer on Anatomy.

THE human corpuscle, say the authors of the paper, is circular in form, flattened, and presents a double concave surface. When viewed obliquely and nearly in profile, a central depression is distinctly observed. Its diameter measures, on the average,  $\frac{1}{3256}$  of an inch. The edge will be found to vary much in thickness, as will be afterwards explained. It usually measures about onefourth the diameter. A front view also shows a concavity, the centre of which is destitute of coloring matter; but no distinct nucleus can be demonstrated in its unprepared state. We have, however, frequently succeeded in bringing it into view, by decomposing the globule by means of water, or of a very weak solution of sugar and water. A drop of blood and a drop of water may be placed close together on a piece of glass, and allowed to coalesce; when the nuclei will be found to collect principally about the lower edge of the specimen: or the method recommended by Hewson may be adopted, which consists in placing some serum, loaded with blood corpuscles, on a piece of glass. The specimen is to be viewed while forming an inclined plane in the field of the microscope: and a drop of water is to be added, in such a way that it may flow from the upper to the lower edge of the piece of glass. In its descent it will be found to alter the form of the blood corpuscle, which becomes more rounded and transparent. The nucleus may now be observed in many of the corpuscles, as they roll down the glass: but we have never seen them, as Hewson describes them, moving like a pea in a bladder, as the corpuscle turns upon its axis. In order to convince himself of the existence of a nucleus, the observer should treat the blood of a bird and of the human subject in the same manner. In the former, he will have no difficulty in seeing and separating the nucleus, and in the latter, by transferring the information thus gained, he will, after some little trouble, be enabled to recognize similar appearances, to his entire satisfaction. As we before stated, many of our most accurate observers-Magendie, Hodgkin, and Lister-have denied the existence of a nucleus in the corpuscles of mammalia; and, as far as we know, no description has been given of it, which would in any way meet our views of its form, size, and appearance. The nucleus of the human-blood corpuscle is composed of a thin circular layer, of a colorless substance. Its surfaces are granular, and its

edge uneven. It is only about one half less in diameter than the blood corpuscle itself; for which, no doubt, it has been frequently mistaken. It measures from  $\frac{1}{4500}$  to  $\frac{1}{000}$  of an inch in diameter. Its thickness cannot be so satisfactorily stated; it does not appear to be more than one-eighth, or one-tenth of its diameter. It may be demonstrated in its moist or dried state, either within its envelope, or separate from it.

Several circumstances have combined to render this nucleus difficult of observation, and which may serve to account for its eluding the notice of so many micrographers. Its thin shape, circular form, and large size, have led to its being mistaken for the blood corpuscle, deprived of coloring matter; while the erroneous notion that the nucleus was a small globular body has not only favored the misconception, but has led those who have looked for a nucleus of this form to deny its existence altogether. The edge, also, of the nucleus projects so far into the coloring canal, that its defined margin cannot be seen, until this has been destroyed by the removal of the envelope. The envelope in the human subject does not differ in any essential particular from that of the frog. It forms a closed flattened vesicle, the interior of which adheres firmly to the central part of both surfaces of the nucleus, but not elsewhere. The envelope, like the nucleus, is circular, and forms a complete annular canal around it, in which the red coloring matter is situated.—Medico Chirurgical Review.

Experimental Researches on the Function of the Skin in Man and Animals.

By Dr. Ducros.

In a very curious experimental paper, Dr. Ducros shows that a coating of gumlac put on the skins of animals causes them to die in a longer or shorter time, by producing convulsive movements similar to epilepsy. When the animals, coated with gum-lac, were subjected to electricity, they died in a much shorter time. He next tried the effect of metallic coverings, as he entertained the notion that, because they had opposite electrical properties, the animals coated with them would die with symptoms of an opposite nature. He therefore cut off the hair from some animals and covered them with thin plates of tin, (tin-foil) and found that they perished with symptoms of debility, the reverse of what he had noticed when the coating consisted of a resinous substance. When the tin was covered with a coating of gum-lac, the animals perished much more rapidly. He then placed under the influence of electricity some of the animals covered with plates of tin, and found that so long as they remained connected with the electrical current, their vigor appeared to be restored, but that whenever it was arrested, they appeared ready to perish.

The object of these experiments was to ascertain what would be the likely effect of such coverings in certain diseased states of the human frame, and especially in nervous or neuralgic affections and in rheumatism. He reasoned, that, if metallic coverings deprived animals of life by producing rapid sinking of the vital powers, the same metallic plates applied to the human body would cure or remove those diseases which seemed to depend on an excess of organic life. On

putting his plan to the test of practice, he was so fortunate as to find that it removed some nervous, and a few acute and chronic rheumatic affections.

This plan of treatment was of no avail in any case where the disease was dependent on or connected with organic lesions, or attended with fever, or swelling of the part, or with general weakness; on the contrary, in all these cases the metallic plates augmented the disorder.—Edinburgh Med. and Surg. Journ. from Arc. Gen. de Med., March, 1841.

### On the Regeneration and Union of Nerves. By MM. Gunther and Schon.

RABBITS were the animals on which the following observations were made, and about fifty of these were operated on, by sometimes only cutting across the ischiatic nerves, at other times by removing a portion varying from two to four lines in length. These physiologists describe the elementary fibres of the nerves as transparent cylinders with double funics, filled with a fluid resembling liquid albumen. After maceration in water, or after death, this fluid coagulates and produces the turbid granular aspect which, till now, has been considered its natural appearance. When the two extremities of a nerve which has been cut across become united, the nerve propagates impression through the uniting medium. This is done by means of true primary fibres having been formed through the uniting medium, and the following is the mode in which MM. Gunther and Schon have observed this to take place. After division of the nerve the two ends retract somewhat, the diameter of the neurilema becomes diminished, and the medullary substance is pushed out in a globular form; exudation of plastic lymph then occurs and fills the wound, and the cut extremities of the nerve become swollen, the upper extremity more than the lower. This tumefaction of the nerve itself is owing to the presence of plastic lymph effused into the cellular tissue and also between the neurilema and primitive fibres.

The matter which unites the two ends of the nerve, is at first amorphous, but by degrees primitive fibres shoot through the mass, and become visible at the earliest on the eighth week after division. These new fibres are in every respect similar to the original fibres; but the granular exudation and the cellular tissue which surround and envelope them render them difficult of examination. These fibres are not parallel, but exhibit a confused arrangement.

With the regeneration of the fibres of the nerve returns the sensibility and mobility of the limb or organs to which the nerve was distributed.

But in general the function of the part is not so free as before the division; the animals not being able to use the limb whose nerve had been divided, so freely as the other. The influence of the will over the limb was also observed to be diminished. MM. Gunter and Schon account for this on the supposition, which is borne out by their experiments, that the number of fibres which are regenerated are not equal to those which originally existed; besides it appeared to them that the regenerated fibres occasionally united the ends of different primitive fibres, so that sensation was not always referred to its proper place. They consider that the regeneration or growth of the uniting fibre commenced at the superior extremity of the divided nerve, but concede that it is possible that it may also take place from the lower extremity.—Ibid.

The Structure of the Human Placenta.—By John Dalrymple, Esq., Assistant Surgeon to the London Ophthalmic Infirmary.

THE following are the results of Mr. D's researches and examinations, as given in a recent number of the London Medical Gazette.

- 1. That the placenta was made up of the innumerable subdivisions of the umbilical vessels, terminating in beautiful coils and convoluted capillaries, which formed tufts or bouquets of vessels clothed by a prolongation of the endo-chorion derived from the fætal surface of the organ.
- 2. That no where did a division of an umbilical artery terminate otherwise than in a branch of the umbilical vein; and each branch, as well as tuft of vessels, was covered by a prolongation of the before-named membrane.
- 3. Thus each tuft was, in fact, a real villus: the endochorion being covered internally with an epithelium-like tissue, having nucleated cells and corpuscles.
- 4. The uterine surface of the placenta is covered by the decidua, which does not appear to enter further into the structure of the organ than between the lobules; and the depth to which it thus penetrates varies with the depth of the fissures.
- 5. That fibrous bands stretch from the fætal to the placental surface of the organ, giving firmness and support to the vessels.
- 6. That there are no defined cells in the placenta, but that the nutrient fluids of the mother are poured into the interstices of the tufts, which are not bound or connected together by a common cellular tissue.
- 7. That on the decidual surface of the placenta are thinly scattered, here and there, blunt conical papillæ, about a line and a half in length, made up of innumerable coiled and contorted capillaries. Query—Are these the analogous of the fœtal cotyledons of the ruminant?

From these observations, which were given in a minute detail, the author has attempted to simplify the functions of the human placenta.

He observes, that in the incubated egg, in consequence of the non-connexion between the embryo and parent, that a nutrient and a respiratory organ is indispensable, and hence the more complicated system of vessels. That in the oviparous vertebrata, the vitellary sac and the omphalo-mesenteric vessels represent the placenta of mammalia, which is the absorbent organ of the fœtus. But while in the one case the nutrient materials of the mother, already aërated by her lungs, are conveyed by the uterine arteries for absorption and nutrition of the embryo, in the other the materials of the blood are absorbed by the folds of the vitelline sac, and conveyed through the circulation of the young bird, requiring, however, contact with oxygen for a second circulation: hence a new membrane, or one that is persistent up to the time of independent respiration, viz. the allantois: and hence also the more complicated system of its vessels. The allantois, as a respiratory membrane, exists only as a rudimentary organ in mammalia, and the function of the placenta being solely that of nutrition by already oxygenized materials, the cord contains only a simple system of incurrent and excurrent vessels.

Lond. Med. Gaz.

## Kiestein as an Evidence of Pregnancy.

In No. 11 of the Guy's Hospital Reports there is a valuable paper upon this subject, by Dr. Bird, in which he enumerates many cases to prove the existence of this principle in the urine of pregnant women. The object of this paper is not only in furtherance of its value as such a test, but to point out certain precautions to be observed in the experiments, in order to prevent fallacy.

The urine should be procured at a time when the woman is as free from disease as possible; and we believe that passed early in the morning, after rest, gives the least variable indications. This should be exposed in a tall narrow glass, to a continuous temperature of about 70° of F.; if a much lower temperature than this is used, say about 40°. We have known the urine to stand for more than a fortnight without undergoing any change, although it be replete with kiestein or its principles, at a temperature of 70°. However, if the woman be pregnant, we shall observe, in two or three days, the first indication of its presence by the urine becoming turbid. In a day or two more a thin pellicle forms on its surface, and this gradually acquires consistence up to a fortnight from the outset of the experiment. But long before this time you will have noticed its characteristic odor; certainly not like cheese, to which Dr. Bird compares it, but precisely analogous to the smell of raw beef beginning to putrify; it is emphatically a putrid smell. We have kept the urine more than a month after this, but it never loses either its pellicles or peculiar odor.

Besides the error likely to arise from the adoption of too low a temperature, where the kiestein would not be separated, we would warn the early experimenter not to fall into the opposite error of confounding the pellicle which forms upon all urine on standing, especially that which contains the lithates in excess; the more so as the general as well as microscopic appearance of this pellicle is often precisely like that of kiestein. The appearance we are now alluding to, however, is never accompanied with the putrid animal odor; but, on the contrary, gives out a copious smell of ammonia, and when disturbed, falls immediately to the bottom of the liquid. These are the two especial distinctions.

On the value of this test we shall be very brief:—Of the 30 cases examined by Dr. Bird, 27 gave the required indications of the presence of kiestein; the other three were at the time suffering under febrile excitement. Dr. Bird could not detect it in the urine of unimpregnated women, or after parturition, and during suckling.

In the American Medical Library, as quoted by the British and Foreign Medical Review for October last, is a report of the experiments of Drs. McPherters and Perry, the resident physicians at Philadelphia Hospital. These gentlemen found it in the urine of 24 out of 27 pregnant women. Of the three negative cases, two were not in health when experimented on; further, they could not detect it in the urine of 27 unimpregnated women.

In our experiments, which have been made at all dates, between the second and ninth month of utero gestation, there was unquestionable evidence of kiestein in 48 out of 50 cases. We are unable to account for its absence in the two ex-

ceptions, for we took care at all times to have the urine from women as free from disorder as possible.

In 17 non-pregnant women there was no indication of its presence. In examining the urine of 10 women during the time of suckling, we found it in all immediately after delivery, but that the evidence of its existence fell off at a period between the second and six months.

A question now naturally arises as to the cause of the presence of this principle, and what is its composition? It appears easily accounted for on the known sympathy that exists between the uterus and breasts; the latter of which, taking cognizance of the gravid condition of the uterus, prepares itself betimes for the proper performance of that function which by and by is to become its necessary duty. Certain principles analogous to those of milk, being imperfectly secreted, may, in this nascent condition, become reabsorbed; because, as Dr. Bird suggests, they do not find a ready outlet, and getting into the blood are excreted thence by the kidneys; and this habit of reabsorption may go on for some little time after the birth of the child.

The composition of kiestein is not so easily made out: examined by the microscope it consists at first of a multitude of globules, varying in size from the 1-32000 to the 1-8000 of an inch; after a time these break up, or coalesce and form flakes, and then crystals of triple phosphate generally become pretty abundant in it. This shows that greasy appearance of the pellicle is not due, as Dr. Bird supposes, to the triple phosphate, for this is after formation; nor are these globules composed of fat, for they are perfectly insoluble in ether. We have not been able to detect them in the urine until it becomes turbid, so that they appear to be formed in the urine after expulsion. They are soluble in alkalies and in boiling acetic acid, and give all the reactions characteristic of coagulated albumen or fibrin: to these, then, they are most analogous; but nothing but an ultimate analysis can determine their identity or not. The globules do not differ in appearance from those contained in milk, but their complete insolubility in ether shows that they do differ.—London Medical Gazette.

## MATERIA MEDICA AND PHARMACY.

On the Medicinal Properties of Fish-liver Oil.

The fish, from the livers of which the oil that has at different times been much recommended in a variety of diseases is obtained, are the cod and one or two species of the ray—oleum jecoris aselli vell rajæ. We learn from M. Tiedemann, a merchant of Bremen who has long dealt in the article, that there are four kinds of cod-oil in commerce. The livers are packed in a cask, end upwards, and exposed for a length of time to the heat of the sun. When the upper layers are removed, the clearest oil is obtained; this is found to become stronger and darker towards the lower part of the cask. The darkest and thickest is used in the manufacture of chamois leather. MM. Gouzée and Gmelin state in their memoir, (Bulletin Med. Belge, Janvier 1838), that the clearest oil should be used for internal administration; but MM. Trousseau and Pidoux, in their treatise on Ma-

teria Medica, recommend not only the second degree, which has a fishy taste and causes an acrid sensation in the back of the throat when swallowed, but also the third degree, obtained by boiling the residue, and which is of a brown color, has a most disagreeable empyreumatic smell, and is still more acrid. The opinion of these gentlemen has been confirmed by the experience of most physicians in Germany and Belgium—that the thick acrid oil is much more efficacious than that which is transparent and milder.

Within the last five years, chemical analysis has detected the presence of a small proportion of iodine in fish-liver oil; but it is very doubtful that its medicinal virtues depend upon this principle. However this may be, it is certainly true that the browner the oil is, the more iodine is usually present in it.

That fish oil has been long known as a remedial agent, is proved by the narrative in the Apocryphal book of the Bible of Tobias and the Angel: Tobias is ordered to take the heart, liver, and gall of the fish that he has caught on the banks of the Tigris, and use them in a prescribed manner. Pliny too, in his Natural History, expressly states; "lichenes et lepras tollit adeps vituli marini, murænarum cinis cum mellis obolis ternis, jecur pastinacæ (raiæ) in oleo decoctum. . . . . . Quidam delphini jecur in fictili torrent, donec pinguetudo similis oleo fluat, ac perungunt." The inhabitants in many parts of England, Holland, and Germany have been from time immemorial in the habit of employing cod-liver oil in the treatment of chronic rheumatism, rachitis, &c.; but it was not until Michaelis about the middle of the last century, and subsequently Dr. Percival (1790) and Dr. Darbey (London Medical Gazette, vol. 3, p. 392), drew the public attention to its effects, that it has been at all generally known to medical men. There are numerous reports of its efficacy in the German Journals, references to all of which are given by Dr. Delcour in the number of the Archives de la Med. Belge, for last June.

The physiological effect of fish-liver oil appears to be that of a general stimulant of the whole body. It is apt to produce nausea and even vomiting at first; but after a short time it ceases to do so, and often the appetite very sensibly improves under its use. The urinary secretion is generally increased in quantity, and often a copious deposit of lateritious sediment takes place. The skin and also the uterus are stimulated by its use; hence its utility in several cutaneous diseases and in amenorrhæa. From its established efficacy in scrofulous and other cachectic states which indicate an unhealthy state of the nutritive process, it has been regarded by many as a general roborant, more especially of the alimentary canal and of the lacteal and vascular systems. In most cases where the blood is poor and thin, the best authorities assure us that a long continued use of fish-liver oil exercises a very salutary influence. If this be the case, we can readily understand how it may act in the cure of scrofula, rickets, chronic rheumatism, inveterate affections of the skin, many diseases of the bones, glands, &c. We have already said that in our opinion the therapeutic properties of cod-oil cannot be justly attributed to the small portion of iodine which exists in it. We are quite aware that in many parts of Holland it is given for a length of time to children of a scrofulous family, to prevent the development of the constitutional affection, so common in that country.

But there is this marked difference between the two remedies; iodine, which is so powerful a remedy against enlargements of the thyroid and other glands, has very little effect in diseases of the bones, whereas it is in these intractable cases that the oil has been found to produce its most beneficial consequences. We are far from denying that the oil may owe part of its properties to the iodine contained in it, and that its action in simple scrofula and in amenorrhæa may depend upon this active principle; but how shall we thus explain its influence in rachitis?

We must here notice the opinion of M. Hoebeke, that a long use of fish oil has in numerous cases been followed by a deformity of the pelvis in women, who had previously borne children without any unusual difficulty. In all his cases the deformity was observed to have affected chiefly the transverse diameter and the outlet of the pelvis—whereas that arising from rickets is usually at the inlet, and in an antero-posterior direction.

Now, although we do not dispute the accuracy of the statements of M. Hoebeke and others, we feel much inclined to question the explanation which they give, when they attribute the deformity of the pelvis in women, who had been previously well made, to their having taken large or long-continued doses of codliver oil. It seems to us more probable to suppose that the softening of the pelvic bones had been an accidental occurrence, quite unconnected with the use of this medicine. We know from the history of other cases that this disease of the osseous system often commences after delivery and not unfrequently during gestation; that its progress is always increased by the latter state; that it has many points of resemblance with chronic rheumatism; that it usually commences with pains in the back and pelvic region; and that it induces a deformation of the pelvis, which is different from that caused by rickets and similar to that observed by M. Hoebeke. The committee, appointed to report upon the memoir of this gentleman, very justly observed that in the district where his cases occurred, the climate was damp and unwholesome, and the inhabitants living in great destitution and poverty; that these causes must necessarily have produced great disturbance of the nutritive process; and that the circumstance of cod-liver oil having been taken by the women, in whom the deformity of the pelvis was observed, was probably a mere coincidence, and by no means the cause of the osteo-malacia.\* This view is the more probable, seeing that this peculiar affection has not been observed in other districts, in which fish oil is largely used as a medicine.

Dr. Delcour has collected together a number of cases of genuine rachitis and of scrofulous disease of the bones of a very unfavorable character, in which the most marked benefit was unquestionably derived from the use of this remedy. The high authority of many of the reporters is a sufficient guarantee for the full accuracy of the statements, and we only regret that want of space prevents us from giving them here at length. When we mention that such a man as M. Bretonneau has been convinced from the results of his own experience of the efficacy of the remedy, we need say nothing more.

<sup>\*</sup>By referring to the number of the Medico-Chirurgical Review for October, 1839, p. 549, in which will be found an account of M. *Hoebeke's* extraordinary success in Casarian operations, it will be perceived that we took a similar view of the subject.—

Rev.

As to its effects in inveterate rheumatism, especially when this occurs in a lymphatic and weak habit of body, our author remarks: "There is not a practitioner at Verviers, where chronic rheumatism complicated with scrofula is exceedingly common, who has not had occasion to observe the admirable effects of cod-oil in such cases. By its use a number of persons, who for a length of time had been almost paralytic and martyrs to protracted suffering, have been not only relieved, but perfectly restored to health. Like every other remedy, it does not succeed in all cases; but it has the advantage of being never hurtful. We again repeat, that it is much more efficacious in weak than in robust plethoric constitutions."

M. Tauflieb has recorded in the Gazette Medicale for Nov. 1839, two most interesting cases, in which patients, who had been quite helpless and bedridden for several years in consequence of the swelling and stiffness of their joints, regained, after five or six months treatment, the complete use of their limbs.

Professors Graefe and Ammon have used the oil in several cases of obstinate rheumatic ophthalmia with decided advantage. Their report will be found in the Ophthalmelogical Journal of the latter for 1832. M. Carron de Villards speaks favorably of it as an application to specks and ulcers of the cornea, unaccompanied with inflammation; and the editor of the Archives de la Med. Belge has given a most favorable report of it in such cases, in the Annales d'Oculistique.

The dose of the cod or ray liver oil is from two to four table-spoonsful for an adult, and as many tea-spoonsful for children, in the course of 24 hours; the patient should close his nostrils, when he swallows it. To counteract the unpleasant eructations, a small portion of anisette, or of rum or brandy, may be taken immediately afterwards. If the mouth be previously gargled with any of these liquors, the taste of the oil will be much disguised. Dr. Fehr recommends the following formula for children: of cod-oil an ounce, of subcarbonate of potash one or two drachms, of oil of the calamus aromaticus three drops, and of syrup of orange-peel one ounce—one or two spoonsful for a dose night and morning. Or an emulsion may be made by triturating the oil well with gum, sugar and water. When the stomach will not retain it, it may be administered in the form of enemata; and this mode of exhibition has succeeded in a good many cases.—Archives de la Med. Belg. Juin. 1841.

Comptonia Asplenifolia, Sweet Fern.—A remedy for the Tania. By E. G. WHEELER.

This is an indigenous shrub, from two to four feet high, growing in a shallow soil, in rocky situations, throughout the northern and southern states. Its generic name was given it by Dr. Solander, in honor of the Right Rev. Lord Bishop Henry Compton, of London, a distinguished cultivator of exotics. It is placed in class 19, order 3, of Eaton—50th natural order of Linnæus (amentaceæ), and 99th division of Jussieu's Natural Taxonomy.

Botanical Description.—Male flowers, ament cylindric; with calyx-scales 1-flowered; corol 2-petalled or without petals; filaments forked. Female flowers, spike ovate; calyx-like corol 6-petalled; styles, 2; nut, 1-celled, oval. Blossoms in

April. Leaves alternate, alternately crenate-pinnatifid, revolute, ciliate; resembling those of the spleenwort (asplenium); hence the specific name. Shrub very branching; branches reddish; recent ones pubescent.

Medicinal Properties.—It is classed with astringents by Linnæus, and is considered aromatic, astringent and stomachic by Jussieu. Drs. Barton and Bigelow ascribe to it astringent and tonic properties. It has frequently been used with very happy effect in cases of diarrhea and of general debility; and the decoction, as a fomentation in rheumatism. In cholera infantum it has, also, been much used. Dr. Barton, in his "Vegetable Materia Medica," says "the decoction sweetened forms an extremely grateful drink for children in the summer complaint, and from its moderate astringency and bracing and tonic effect on the bowels, it will always be found to be a useful auxiliary in the treatment of this disease. I gave it, last summer, to one of my children, in this complaint, and with encouraging success." Shæpf ascribes to it still other virtues.\* Recently it has been gaining considerable celebrity as an anthelmintic; especially has it been supposed to be a useful remedy when properly directed, for the removal of the tænia. The following is in favor of the supposition.

Case.—Mr. I. F. of U. æt. 35, formerly a merchant in Boston, had for many years been attended with symptoms peculiar to worm cases, and for twenty years past had voided, from time to time, portions of a tapeworm, some of them measuring several feet in length. † He had tried the remedies usually prescribed in similar cases, having gone quite through the catalogue of medicines denominated anthelmintics, but all to little purpose, as portions only of the worm could be got rid of. After he went to reside in the country in 1840, the Comptonia was recommended to him by some friend or neighbor; and he determined to give it a trial. He used it, therefore, in the form of a strong decoction or infusion, drinking large quantities daily for several days, then stopping its use for a short time and taking a brisk cathartic in the interval. This process he often repeated, and generally succeeded in removing a greater or smaller number of joints at each effort. One morning in July, 1840, he called to me from his door, saying he had something to show me. I walked to his house, and there found the troublesome animal exposed to view. It appeared of such enormous length that I at once proposed to take the measure of it; and the gentleman complying and lending his assistance, we found it to be forty-two feet long. Mr. F. had, for two or three weeks previous, been taking the sweet fern tea in larger quantities than usual, and the evening preceding the expulsion of the worm, he took an active purge. During the cathartic operation he discovered that the tænia was slowly passing, and for fear of its breaking off at one of the joints as it had done on all former, like occasions, waited patiently, sitting upon the stool nearly two hours, occasionally making very gentle effort till it passed; and an examination of the smaller extremity proved that we had now before us the whole "beast with its hydra heads," fairly vanquished.

<sup>\*</sup> Shoopf, Materia Medica, p. 142.

<sup>†</sup>Reference is made to this case in the "Medical Miscellany" of the Boston Medical and Surgical Journal, Vol. XXII. p. 418.

It was the tænia osculis marginalibus (tænia solium of Dr. Good—lumbricus cucurbitinus of Dr. Heberden), the oscula being placed on the margin of the joints.

After this worm was expelled, the peculiar symptoms that had attended Mr. F. disappeared, and health returned.

Remarks.—Might not the Comptonia be serviceable in cases of alvine worms of every species, by stimulating the mucous coat of the stomach and intestines to a healthy action, by means of its peculiar tonic and astringent qualities, though it may have no specific action on the worms themselves? It is well known that the lining membrane of the alimentary canal, in individuals most afflicted with these animals, is in a relaxed and vapid condition, and of course, its secretion vitiated; hence it would seem that one important end to be gained in the treatment would be to restore to that membrane its proper tone. As there appears to be a disposition in the alvine canal of some persons, children especially, to cherish worms, owing, no doubt, to an altered secretion, this remedy might prove salutary by preventing their re-accumulation after a number of them has been expelled.—Bost. Medical and Surgical Journal.

## On the Euphorbia Maculata.—By WM. Zollickoffer, M.D., Middleburg, Md.

Some years ago I acquainted the profession, through the medium of the American Journal of the Medical Sciences, with the medicinal virtues of the Euphorbia hypericifolia. The fact of the curative powers of that indigenous production depending on its astringency, consociated with a slight narcotic development, was at variance with the previously conceived opinion of botanists and the writers on medical botany, that all the species belonging to the genus Euphorbia possessed acrid and irritating properties. Wildenow says "they all abound with an acrid milk." This notion was a mere opinion, which doubtless grew out of the circumstance of all the individuals included in this genus of plants possessing acrid properties, so far as their remedial powers had been ascertained. Subsequent experience and observation have, however, proved it to be altogether unfounded, and the virtue of the maculata is an additional attestation still further corroborative of the incorrectness of this preconceived erroneous sentiment.

Generic character.—Euphorbia involucrum caliciform, eight or ten toothed, exterior alternate dentures, glanduloid or petaloid.—Stamina, indefinite, twelve or more, rarely less; filaments articulated; receptacle squamose; female flower, solitary stipitate, naked; capsule, three grained.—Nuttall. The capsule is sometimes smooth, pubescent or warty.

Specific character.—Euphorbia maculata; stem procumbent, spreading flat on the ground, much branched and raisy; leaves opposite, oval or oblong, servulute, oblique at the base, on short petioles, smooth above, hairy and pale beneath; flowers solitary, axillary, much shorter than the leaves. This description, given by Torrey, is more accurate than that given by any other writer.

The maculata is an inhabitant of sandy fields which are cultivated annually. It delights in the same kind of soil as the Euphorbia hypericifolia, and is gene-

rally found growing with this plant. It is an annual production—flowering from the first of July until the last of September. The leaves are not unfrequently stained of a deep brown color. It is from six to twelve inches long; and emits, upon the slightest incision or fracture of any part, a copious milky exudation.

The Euphorbia maculata belongs to the class monœcia; the order monadelphia of Michaux, to the class dodecandra, and order trigynia of Linnæus, and to the natural order tricoccæ of Linnæus. Euphorbia of Jussieu; and Euphorbiaceæ of Professor Lindley, of the University of London.

In its sensible properties this plant is strikingly analogous to the hypericifolia, being partly sweetish, and astringent to the taste.

Solubility.—Diluted alcohol and water both extract the active properties of the plant; but the latter is the best menstruum for the solution of its elements of activity, and for its exhibition.

Chemical composition.—I digested portions of the dried plant in sulphuric ether and alcohol; upon the addition of alcohol to the ethereal solution a whitish precipitate was evident; and by adding distilled water to the alcoholic preparation a pearly turbidness took place in the commixture. The decoction prepared with distilled water threw down a copious precipitate on the addition of a solution of gelatine; and a dark blue color was imparted to a portion of the same decoction by throwing into it a few drops of a solution of the sulphate of iron. From these results it may readily be inferred that the Euphorbia maculata contains caoutchouc, resin, tannin, and gallic acid.

Incompatible substances.—When the infusions and decoctions are exhibited with a view to the production of their remedial effects, the metallic salts into which iron enters as the basis, and the solutions of animal gelatine, should be avoided, from their direct tendency to change the peculiar principle upon which its powers depend, and thereby render it inert.

The astringent properties of the maculata reside in every part of the plant, while the slight narcotic power it possesses is found in the lacteous exudation only.

Medical use.—The consociate combination of an astringent and narcotic, which is found in every part of the Euphorbia maculata, renders it an invaluable remedy in tranquillizing and controlling those morbid conditions of the intestinal canal which give rise to cholera infantum, diarrhæa, and dysentery, particularly in their secondary stages. I have used an infusion of the plant, in the secondary states of diseased action of the maladies under consideration, with as much success as I have frequently witnessed from the exhibition of kino and catechu when administered alone, and in conjunction with opium. In the two latter affections I have generally used the following prescription: R. Euphorbiæ maculatæ foliorum exsiccat., Zi. Infunde in octavio aquæ bulientis. Capiat cochlearia magna unaquaque hora donce morbi symptomata cessantur.

The dose of the above preparation is intended for an adult. In cholera infantum I usually give a teaspoonful of an infusion of the same strength every two or three hours, in the same quantity of water sweetened with loaf sugar. In a variety of morbid discharges from constitutional debility, or arising from relaxation of the affected part, I have found the continued use of the Euphorbia maculata for two or three weeks competent to the production of the most excellent effects.—Amer. Jour. of Med. Sciences.

## Hydrated Sesquioxide of Iron (Ferrugo).

RECENT experiments have established the discovery of MM. Bunsen and Berthold, that the hydrated peroxide of iron proves, in many instances, an antidote to the poisonous effects of arsenious acid, particularly when exhibited frequently and in large doses. A chemical union takes place between them, and in this manner an insoluble arsenite of iron having little activity is the result. The dry sesquioxide of iron having been found much less efficacious than the hydrated form, it is therefore of essential importance that this should be procured at a moment's warning. We have known instances of poisoning where this preparation could not be procured, and where the mode of preparing it was totally unknown to the practitioner, so that the ordinary sesquioxide of iron required to be substituted for it. We are therefore gratified to see a process for its preparation, both in the Edinburgh and Russian Pharmacopæias. In the last named work it is recommended, when intended to be used as an antidote to arsenic, to be preserved, of a jelly-like consistence, in close vessels, the "Hydras Sesquioxydi Ferri, ut antidotum acidi arsenicosi adhibendus, humidus et nequaquam siccatus, gelatinæ quasi speciem referens, in vasis probe clausis servetur." (p. 529). As this is a very important formula, and one which ought to be known to every practitioner, we shall quote the direction for its preparation by the Edinburgh College:-

"Take of Sulphate of Iron, four ounces;

Sulphuric Acid (commercial), three fluidrachms and a half; Nitric Acid (D. 1380), nine fluidrachms; Stronger Aqua Ammoniæ, three fluidounces and a half; Water, two pints;

dissolve the sulphate in the water, add the sulphuric acid, and boil the solution; add then the nitric acid in small portions, boiling the liquid for a minute or two after each addition, until it acquires a yellowish-brown color, and yields a precipitate of the same color with ammonia. Filter; allow the liquid to cool; and add in a full stream the aqua ammoniæ, stirring the mixture briskly. Collect the precipitate on a calico filter; wash it with water till the washings cease to precipitate with nitrate of baryta; squeeze out the water as much as possible, and dry the precipitate at a temperature not exceeding 180°. When this preparation is kept as an antidote for poisoning with arsenic, it is preferable to preserve it in the moist state, after being simply squeezed."—British and Foreign Review.

## Remedy for Hiccough. By C. P. P. F. REIERSEN.

Having been called last week to attend a patient then suffering from severe and continued hiccough, for which several remedies had been prescribed without effect, I ordered magisterium bismuthi, the French "Blanc de fard," on account of its anti-spasmodic effect in nervous affections, in the following manner:—

R Magisterii bismuthi, gr. iii. Pulv: radicis ipecacuanh: gr. iss.

--- sachar: albi, Aj.

M. fiat pulvis. Take one powder every three hours.

The following day I had the pleasure of finding that the hiccough had entirely ceased. A physician is rarely called on in cases of hiccough, but it may perhaps be interesting to your readers to know the effect of said remedy, which effect I have witnessed once before in Europe in a similar case.

#### PATHOLOGY AND THERAPEUTICS.

Treatment of Pneumonia. By Dr. Watson, Lecturer on the Practice of Medicine in King's College, London, &c.

WE want some remedy, therefore, to assist the lancet, or to employ alone when the lancet can do no more; and we have two such, in tartarized antimony and in mercury. The tartar emetic plan I believe to be the best adapted to the first degree of the inflammation—that of engorgement; and the mercurial plan to the second—to that of hepatization.

I need not tell you that the tartarized antimony is not given in this disorder with the object of producing vomiting. It is a very curious thing, that although when administered in a considerable dose, its first effect is often that of exciting sickness, and perhaps purging, a repetition of the same dose is, in the majority of cases, at length borne without any farther vomiting. The stomach comes to tolerate the medicine, as our continental brethren say; and then its beneficial influence upon the disease is no less marked than when nausea and vomiting take place. Some patients do not vomit at all; others, the majority in fact, vomit two or three times, and then tolerance is established. If the sickness and purging go on, they may be checked by adding a few drops of laudanum to each dose. Dr. Thomas Davies, who had tried this remedy largely, and, as he tells us, with great success, gives the following as his own plan of administering it, and perhaps it is as good as any. After free bleeding, he begins with one-third of a grain of tartar emetic in half a wine-glassful of water, with a few drops of laudanum or syrup of poppies. Two doses of this strength he gives at the interval of one hour from each other. He then, if the patient does not vomit, omits the opium, but continues it if he does, doubling, however, the quantity of the tartar emetic, giving two-thirds of a grain for two successive hours; and in this way he goes on, adding two-thirds of a grain every two hours, until he reaches two grains every hour. This last quantity he has not exceeded, and he says he has continued it for many days without producing any injurious effect.

Under this plan of treatment the symptoms will often undergo a marked change for the better, in three or four hours. Sometimes, however, the relief is not conspicuous for twenty-four or even for thirty-six hours. He states, and this is accordant with my own experience of the remedy, that the tartar emetic always acts best when it produces no effect except upon the inflammation itself; i. e. when it does not produce vomiting, or purging, or a general depression of the powers of the system. This is an important practical remark, because many persons have supposed that it subdues the disease only when it previously gives rise to these effects. I consider this testimony of Dr. Davies to the power of the tartarized antimony in controlling inflammation of the lung the more valuable, because he informs us, that before he had occasion to see its admirable effects in the first

stage of pneumonia, he had been in the habit of trusting to the free use of mercury, after due depletion.

When the dyspnæa has been put an end to by antimony thus exhibited, the medicine may be intermitted; and if the inflammation show any disposition to rekindle, it must be again extinguished by a repetition of the tartar emetic.

When, however, the inflammation has reached the second stage, that of solidification, mercury is more worthy of confidence in my opinion, than tartarized antimony. And I have little or nothing to add to what I formerly said in respect to the mode in which it ought to be administered. The only object of giving it is to make the gums tender; and it is expedient to do this as speedily as may be. Small doses of calomel repeated at short intervals—a grain every hour, or two grains every two hours, or three grains every three hours—combined with so much of laudanum or of opium as may be requisite to prevent it from running off by the bowels—offer the most certain way of accomplishing our object. If the bowels are irritable under the calomel, blue pill, or the hydrargyrum cum cretâ, may be substituted for it with advantage: and if the internal use of mercury be any how contra-indicated, or if it appears slow in occasioning its specific effect, the linimentum hydrargyri may be rubbed in, or the strong mercurial ointment.

Many persons, I am persuaded, are saved by treatment of this kind, pushed to slight ptyalism: the effusion of lymph, tending to spoil the texture of the lung, is arrested; and the lymph already effused begins to be again absorbed: and the ease and comfort of the patient, as well as the alteration for the better of the physical sounds, attest the healing qualities of the remedy.—Medical Gazette.

Treatment of Tape Worm. By Dr. WAWRUCH, Professor of the Practice of Medicine in the University uf Vienna.

In 206 cases of tape worm, Dr. Wawruch found the following treatment the most efficacious:

As a preparatory step, all the patients took a laxative decoction with sal ammoniac, for three, four, or five days, and ate nothing but weak soup thrice a day. In eight cases the worm was expelled by the mere effect of continued abstinence. The anthelmintic remedies employed were, castor oil, and the powdered root of the male fern. From one to two tablespoonsful of the oil were given as a dose, alternately with one or two drachms of the powder twice or thrice a day.

Enemata of oil and milk were frequently thrown up, to attract the worm towards the large intestine, and it was observed, that the effect of the drastic was always most sure when given a certain time after the last dose of fern, than at once. The drastic purge employed was composed of equal parts of calomel, gamboge, and sugar, two to eight grains of each for a dose. In many cases a single dose brought the worm away, but in others three to six doses were required. The period at which the worm was discharged was very various. In eight cases, as has been already remarked, it was expelled by the mere effect of hunger; in thirteen cases, by the anthelmintics alone; in eleven by the first, in fourteen by the second, and in fifteen cases by the third drastic purge; and generally speaking, it was expelled within one to twelve hours after the last drastic. In a few

cases, two, three, four (and in one twelve) days elapsed after the last purge, before the worm was expelled. The tænia is not exclusively a solitary worm, for in nine cases there were two worms, of different ages and development; in two cases three worms. In one very remarkable case, four worms were discharged, and this patient still suffers from the complaint. Of the 206 cases only twenty-six had a relapse; twenty of these came twice, five thrice, and one of them four times to the hospital. Some came in two to four months; two in nine months; two in a year. Generally speaking, the patient may expect to be entirely freed from this disease, if he pass ten or twelve weeks without discharging any remnants of the worm.—Provincial Med. and Surg. Journal.

## Treatment of Neuralgia.

[From a review of a French work, by M. Valleix, on neuralgia, in the last No. of the British and Foreign Medical Review, we take the following remarks on the treatment of that disease.]

We now proceed to the consideration of the treatment of neuralgia, a subject which, notwithstanding its great importance, will detain us but a short time, because, excepting on one or two points, our author differs but little from the opinions of preceding writers. We shall begin with the internal administration of remedies; and here, at the outset, we would remark that, throughout the entire course of the work before us, M. Valleix does not once refer to the purgative plan. It is impossible that he can be ignorant of it, and equally so that he should be unaware of the success which has undoubtedly attended it in many cases, though it has failed in producing all the benefit that was once confidently anticipated from its employment. How the omission is to be explained we know not, but it is assuredly one of no small magnitude. Several years ago Sir Charles Bell reported in the Medical Gazette his success in the treatment of tic on this plan, the principal purgative being croton oil. He has noticed the subject at greater length in a late publication, and Dr. Newbigging has recently published a report on the same subject. Dr. Allnatt, in the little work on tic douloureux noticed in our last No., has adopted the same mode of treatment, and, according to his report, with very great success. In some of these cases the croton oil would seem to have had some other (specific) effect, besides its general action as a purgative.

M. Valleix has no faith in the internal use of narcotics as a means of cure, having never met with a case in which the disease was removed by their employment. As palliatives they are of course extremely valuable, for in a disorder so painful the most temporary relief is a matter of no little moment. The experience of practitioners in this country is, however, more favorable to this class of remedies, numerous cases being on record which have been cured by the exhibition of various sedative remedies, especially the belladonna. Our author speaks very doubtfully regarding the efficacy of the sesquioxide of iron; he does not seem to have employed it himself, and objects to the cases related by other observers, that the treatment has generally been too complex to allow of any decided opinion being formed. Unquestionably this objection applies to the majority of published cases, yet several are on record in which the beneficial effect of

the medicine could hardly be called in question. He takes a more favorable view of the celebrated pills of Meglin (composed of hyoscyamus and oxide of zinc; aa. gr. j. in each pill), and believes that in many cases, when the plan has failed, this event is to be attributed to the smallness of the dose and the want of perseverance in the administration of the medicine. M. Meglin sometimes gave as many as from thirty-six to forty-eight pills a day without producing any bad effects—a somewhat wholesale mode of treatment!

When the paroxysms are decidedly periodical, the practitioner will do well to make trial either of the *quinine* or *arsenic*; remarkable success has been obtained from both.

We have yet to mention one other internal remedy which has been employed with singular advantage in the treatment of the sciatic form of neuralgia, we mean the oil of turpentine. This means of cure has been most successful in the hands of M. Martinet, and though, like all others, it will often fail, it is certainly one that deserves particular attention. Professor Romberg speaks highly of it: he has not observed that feeling of warmth extending from the intestinal canal to the nerves, in successful cases, which is insisted on by M. Martinet. He prefers the form of electuary, composed in the following manner: R. Ol. tereb., 3 j.; syrup. aurant. vel. mellis, 3 ij. M. A table spoonful twice a day.

If the taste be disagreeable to the patient, the following formula, recommended by Martinet, may be adopted: R. Ol. tereb., Zj.; magnes. calcin.,  $\mathfrak{Z}$  iiss.; ol. ment., gtt. viii. M. A bolus of the size of a hazel nut, to be taken in a wafer (pain a chanter) three times a day.

In reference to the employment of external remedies, our notice must be almost entirely confined to one plan of treatment, which in every case where it has been employed by our author has been productive of great alleviation in the symptoms, and which has often succeeded by itself in effecting a cure; we allude to the application of a succession of small blisters over the points in the course of the nerves which are painful upon pressure. Many of the instances recorded in the work before us, in which this remedy has rapidly removed the pre-existing symptoms, are of the most striking nature, and we earnestly recommend their attentive perusal. The plan is not altogether original; Cotugno employed one very similar; but the idea of singling out the particular localities where there is either the constant dull pain, or which are painful upon pressure, is, we believe, to be attributed to M. Valleix alone. He considers this method decidedly preferable to the use of irritating ointments to the denuded surface of the skin, which is often productive of intolerable pain, and has frequently appeared rather to aggravate the symptoms than conduce to a cure. The endermic employment of morphia may be attempted with advantage in some cases, but it is a painful remedy. Dr. Basedow has procured much relief from careful bandaging of the affected limb. (Romberg, l. c. p. 70.)

The actual cautery has been employed with success, particularly by M. Jobert, but we perfectly agree with our author that it should never be employed until other means, and especially blisters, have been tried and found of no avail. The same remark applies to section of the nerve, and the removal of part of its substance, both of which so frequently disappoint the expectation of the practitioner and the hopes of the unfortunate patient. M. Valleix has seldom employed electricity, and never with success.—Boston Med. & Surg. Jour.

Treatment of Sore Throat, or Angina, by Alum. By M. VELPEAU, Paris.

[Ir was the celebrated and practical Bretonneau, while in the hospital of Tours, who first instructed his illustrious pupil, Velpeau, in many really practical views, and among the rest in the use of alum, &c., in inflammatory sore throat. M. Bretonneau first tried his remedies successfully in croup. Velpeau tried the nitrate of silver in 1819—in 1828 and 1829 he tried alum with success, and published a paper on the subject in the Gazette Médicale of 1830. In that paper he hints that the use of alum may be much extended, and cites the experience of M. De Laennec, of Nantes, who assures us that by blowing powdered alum on the inflamed amygdalæ we not only cure the disease, but prevent a relapse. Cases of angina are frequently so little influenced by antiphlogistic remedies, that we are warranted in seeking success from other measures. Moreover, many would be at a loss when to apply Bretonneau's treatment to croup or to angina with effusion of false membrane, and this because it is often difficult to distinguish the one from the other. This difficulty is removed when we can show that the same treatment is applicable to the one as well as to the other.]

Although, perhaps, it may be true that the experiments which I have recently made are not sufficiently numerous to put the question completely at rest, yet they seem to me so encouraging, that medical men should at least repeat them. The result of the treatment which I have employed was always the same. In all the cases the inflammation had appeared suddenly, and was attended by fever; most of the patients commenced with the alum on the second day; the throat was then very red and painful, the tongue foul, &c., some had arrived at the fifth, sixth, or eighth day, with high fever, redness and swelling of the face, considerable tumefaction of the amygdalæ, great difficulty of swallowing and breathing, thirst, &c.; in two cases suppuration appeared to be imminent. The treatment, as I have said, was the same in all cases, and consisted in the use of alum, either as a gargle or in powder. The tip of the finger, moistened, is to be covered with powdered alum, and then rubbed all over the inflamed parts, whilst the tongue is depressed with the handle of a spoon. The powder may be applied with a small brush, or a bit of sponge, &c., on the end of a little stick, or it may be blown into the throat with a tube; but the use of the finger is preferable, for with it the surgeon can readily reach every point of the inflamed surface behind the velum pendulum, and even as far back as the entrance to the larvnx; besides. an intelligent patient can apply the powder with his own finger, as I have often witnessed.

When a certain quantity of alum has been applied with the finger, the latter may be withdrawn and a fresh application made, until the whole of the inflamed surface be covered with it, and, as a preliminary measure, the patient should frequently gargle his throat to remove any mucus, &c. The use of the powder may be repeated twice or thrice a day, at equal intervals, and in the meantime the patient should frequently gargle his throat with a solution of one to four drachms of alum in four ounces of barley water.

In employing the alum after the manner which I have just described, we generally produce some nausea, cough, &c.; but these soon disappear, and the acrid

taste of the medicine is also soon lost. The pain and febrile symptoms almost always diminish in an evident manner, after the first or second application, and the patient improves so rapidly, that on the third or fourth day (and in some cases on the following day) he feels himself perfectly well. The most remarkable effect produced by this remedy is the rapid disappearance of the febrile symptoms, and the change in the tone of the voice; one would think that some deleterious principle had been suddenly neutralized, and the disorder reduced to a simple mechanical obstacle from the increased volume of the affected parts.

In cases where the inflammation is mild, and the throat merely red without being swollen, the alum gargle will be sufficient; even in more severe cases the gargle will often succeed, but it is then more prudent to have recourse to the powder at once. Among the advantages of this mode of treatment, gentlemen, one of the greatest perhaps is, that it seems to remove the well known tendency of angina to recur; besides, the patient is not forced to lie in bed, and you may allow him some food, without any inconvenience, as soon as he is able to swallow.

[Several very excellent cases are given to exemplify the preceding practice.]—

Prov. Med. and Surg. Jour.

Colica Pictonum treated with warm water. By John Wilson, M.D., Physician to the Middlesex hospital.

WE all know the difficulty which frequently arises in this complaint in procuring a free evacuation from the bowels. The following case, related by Dr. Wilson, was relieved in a very simple and efficacious way, and will no doubt be more generally adopted. The patient, Matthew Proctor, aged 45, was a plumber and painter; his bowels were most obstinately costive for several days.

On admission he was put into a warm bath, and when he had been in it for some time an elastic injecting tube was given him, with directions to employ it in trying to inject the water of the bath gradually up the intestines, and to persevere, should he feel no pain nor unpleasant sensation, till he felt a sensation of fulness of the abdomen. In this he succeeded while he continued immersed in the bath; shortly after, and before he quitted the bath, he had an evacuation of lumpy fæces. After leaving it he was purged four or five times, and relieved from the pain. The next day he had an ounce of castor oil, with gtt. xx. tinct. opii. and a sinapism to the abdomen. The third day the bath and enema while in the bath were repeated; after which, while he remained in the hospital, his bowels never required more than the mistura alba (sulph. mag. 3ss. carb. mag. gr. v., in mint water,) two or three times a day. 21st day, free from pain; bowels regular; no complaint.—Medico-Chirurgical Transactions.

## Belladonna in Cases of Ileus. By M. BECKER.

M. Becker has employed an injection of belladonna with the best effects in a case of ileus. A woman forty-eight years of age was seized, without any appa-

rent cause, with constipation and vomiting; the ejected matter became gradually more foul, and at length fæcal matter was thrown up; this state had continued for five days, when M. Becker ordered a lavement, containing four scruples of the belladonna root. The pain of the abdomen, vomiting, &c., soon ceased, and in half an hour the woman passed a stool, with a good deal of blood in it. No narcotic effects were produced by the remedy.—Gaz. Med.

Mode of Preventing the formation of Gouty Concretions. By Alexander Ure, M.D.

THE urate of soda, which forms the chief bulk of gouty concretions, being an extremely insoluble salt, Dr. Ure thought that if any means could be devised, so to modify the secretion of the urates, so as either to render them soluble, or to supersede them altogether, these concretions might be prevented from forming. In the course of his researches, he found that hippuric acid combined with soda, which he regarded as the analogue of gouty concretions, occurred in the urine of graminivorous animals. This salt is extremely soluble, two parts of water at 60° dissolving one part of it. Dr. Ure then ascertained by repeated experiment on himself and others, that the one salt might be substituted for the other in the human body, without any risk of affecting the general health or irritating the urinary organs. This was accomplished by administering internally the benzoic acid, an hour after a meal, when he found that the urine voided a couple of hours afterwards gave on the addition of muriatic acid, a copious precipitate of beautiful rosepink acicular crystals of hippuric acid. The quantity procured in this way was, in general, equivalent by atomic computation to half of the benzoic acid employed, so that the remainder of that acid must have made its escape by some other emunctory. The same result was obtained when the hippurates of potash or of ammonia were used, and he thinks it would often be found preferable to employ them instead of the simple acid. The dose could easily be apportioned to the state of the urinary secretion, previously ascertained by experiment. Thus, by a process of vital chemistry, an acid containing 8 atoms of azote and 10 of carbon, is replaced by one containing 18 of carbon and only 2 of azote, and that too in what has been regarded as a highly azotized state of the system.

Mr. Ure has not yet ascertained how far this plan of treatment is applicable to all the various forms of calculous diseases connected with gouty diathesis; but he has not found it to interfere with the other remedial means; and unequivocal proofs, he says have been already afforded him, of its efficacy in correcting and removing certain disordered states of the urine in individuals prone to attacks of gravel.—Medico Chirurgical Trans. 1841.

# Effect of Sulphate of Quinia on the Spleen.

WHILE following the clinics of M. Piorry, at La Pitié, our attention was called to some observations made by this distinguished physician with regard to the action of the sulphate of quinia upon the spleen in cases of intermittent fever. A careful and prolonged examination of the cases which appeared from time to

time in his wards, served to convince us of the truth of Piorry's statements. It is thought that some brief notes of a few cases cannot fail of being interesting to the readers of the Journal.

Case 1, æt. 18, entered the hospital with intermittent fever of the quotidian type on the 14th. All the organs were healthy except the spleen, the length of which was seven inches and ten lines, breadth five inches five lines. On the morning of the 15th 3 ss. sulph. quinia was administered; twenty minutes after, percussion demonstrated that the hypertrophied organ had been reduced to six inches six lines in length, and to four inches four lines in breadth. The paroxysms were diminished in intensity, but persisted until the 18th; the spleen preserving its reduced volume. 19th.—Э ij. sulph. quinia; twenty minutes after, the spleen presented only three inches five lines in length, and three inches three lines in breadth. From this time the patient had no more attacks; the spleen preserved its volume, and on the 24th he went out of the hospital cured.

Case 2, æt. 19, constitution robust, entered on the 9th, with a quotidian intermittent of three weeks' duration. At the period of his entrance the spleen measured six inches six lines in length. 3 i. sulph. quinia in two doses; in a few minutes it was reduced to five inches five lines in length, but after this it was impossible to obtain any further reduction, although doses as large as the above were administered. Vesicatories upon the splenic region, with general bleeding, had no more effect. Piorry thought that the sulph. quinia had not been given in sufficient quantity, and accordingly on the 21st, 9 A. M., 3 i. at a single dose; twenty minutes after, the spleen measured about three inches six lines in length, instead of five inches five lines. This large dose occasioned no difficulty whatever. The spleen preserved its volume, and on the 26th the patient was discharged cured.

Case 3, æt. 23, quotidian, entered 20th, after having had four paroxysms. Spleen five inches five lines in length, and four inches four lines broad. Other organs normal. 23d. 3 i. sulph. quinia in one dose. In ten minutes spleen reduced to four inches seven lines in length, and three inches six lines transversely. From this day the fever ceased. 24th.—Dij. sulph. quinia; reduction in ten minutes, three inches six lines by three inches three lines. 27th.—Discharged cured.

Case 4, æt. 30, entered 6th. All the organs healthy except the spleen, which measured four inches seven lines by two inches six lines. 7th.—Twelve minutes after the administration of  $\beta$ ij. of the salt the spleen was reduced to four inches in length by two inches three lines in breadth; the heat and fever ceased. 8th.—A dose of 3ss.; in ten minutes spleen measured but three inches three lines by two inches three lines. Discharged cured on the 10th.

The foregoing summary of a few cases, although drawn up with too much brevity, will suffice to illustrate this recent discovery.

The urine has been repeatedly analyzed, and with nearly the same results; for example, ten minutes after a dose of  $\Im$ i. sulph. quinia had been administered to a patient,  $\Im$ iv. of his urine was found by M. Bourchardt to contain ss gr. of the alkaloid. The hypertrophy of the organ remains always the same in the different stages of the fever.

Piorry contends that "the fever is not the cause but the manifestation of the pathological condition of the spleen." In support of this theory he refers to several cases, from which we select the following:—"Two persons, after having

fallen violently upon the left side, experienced in the region of the spleen a permanent pain, after an interval of fifteen days in one case, of six days only in the other-beginning by an access of fever of the quotidian type in the first case, by a quartan in the second. At their entrance into the hospital both presented a daily paroxysm very complete. In both the pain in the splenic region augmented on pressure, especially in the inferior part of the circumference of the organ. A bleeding in one case was sufficient to remove all the symptoms; the sanguineous depletion dissipated the pain in the other case, and reduced almost entirely the febrile accessions, which did not disappear completely until after the administration of Ai. sulph. quinia. The first was cured in 48 hours, the second in four days. We see here paroxysms follow the sufferings of the spleen in a very evident manner; on the other side, we have found that this organ augments very sensibly by a repetition of the paroxysms. Are we not right in concluding that things occur in an analogous manner in marsh fever, and that in both cases the fever is not the cause, but the result of the disease of the spleen?" He teaches also that, if the remedies are directed to this organ so as to reduce it to its normal volume, there is no danger of a relapse, and that there can be no radical cure unless this be effected.

We might here remark that, though the observations of M. Piorry seem to prove that the spleen is hypertrophied in all intermittents, yet there are many eminent pathologists who have entertained a contrary opinion. M. Bailly, for example, in thirty-three post-mortem examinations of persons who died from this affection, found only two cases in which the spleen was enlarged. Whatever may be the fact with regard to this, or to the theory of M. Piorry, of this much we are certain, that the administration of the sulphate of quinia in large doses causes an almost instantaneous reduction of the spleen when enlarged.

The whole subject may not be unworthy the notice of American practitioners who reside in those districts in which intermittents prevail. It would be interesting to observe if bleeding in the cold stage, the use of the cornus Florida, eupatorium perfoliatum, and the various other remedies employed in this disease, produce the same effect.

To those who are unaccustomed to percussion it may seem impracticable to measure any of the viscera with the precision indicated above. With the ordinary method this is at least difficult; but if auscultatory percussion be employed as invented by Drs. Camman and Clark of New York, the spleen and many other internal organs can be measured with almost mathematical accuracy.—Boston Medical and Surgical Journal.

On the Repeated Application of one or two Leeches to the Knee in Dysmenorrhæa.

By M. TROUSSEAU.

In three hospital patients under the care of M. Trousseau the catamenia have followed the application of a leech to the internal surface of the knee. In one case a leech was applied to the right knee; while it held on the patient experienced nothing particular, but as soon as it fell off pains in the loins came on, which lasted almost an hour, and the discharge then appeared. The next day it was

arrested again, and a leech was applied to the left knee; and the discharge appeared as before, and continued as usual during three days. In another case the pains of uterine congestion commenced with the application of the leech, which adhered during an hour. The effect produced by one leech is not wonderful, says M. Trousseau, because if the bleeding is allowed to continue, as large a quantity of blood flows as the ordinary amount of menstrual discharge.—British and Foreign Medical Review.

## Glanders communicated by a Patient to his Attendant.

A PATIENT was recently admitted to the hospital Necker, laboring under glanders. M. Rocher, one of the medical assistants, was much interested in the case, and paid much attention to it. After the death of the patient he conducted the autopsy, and held in his hands some of the parts, examining them at leisure. On the following night he was seized with shivering and pain in various parts of his body: by the fifth day tumors were formed in the thigh and shoulder, the former of which suppurated. In three days more another similar tumor formed in the right foot. By the 14th day the lining membrane of the nostrils had become inflamed, with purulent discharge, and pustules formed on the head. He died on the 16th day. A horse was inoculated with some of the matter, and died of the disease. M. Rocher, so far as it could be ascertained, had no scratch or wound about his hands, by which he could have been inoculated, and is supposed to have taken the disease by imbibition, or by miasmatic infection.—London Medical Gazette.

On the Immersion of Children apparently stillborn in Cold Water. By D. Scholer, Assistant Physician of the Berlin Lying-in Institution.

Nothing more need be said of this paper (published in the Med. Zeitung) than that it contains two well detailed cases, and alludes to several others, in which this measure was successfully adopted, after all the ordinary means had failed of reanimating the infant. The evidence adduced is certainly sufficient to warrant the adoption of the plan as a last resource after less violent measures have been tried in vain.—Brit. Med. Review.

## Most obstinate Hiccup cured with Quinine.

A COUNTRYMAN was seized, while recovering from an attack of ague, with a convulsive hiccup, which recurred every few moments. A variety of antispasmodic remedies, such as ether, valerian, musk, assafætida, opium, &c., were tried, but without relieving the troublesome symptom: blisters also, as well as other cutaneous irritants, were applied with equal unsuccess. For nine days the hiccup continued with but little intermission, and this was only at irregular intervals for about a quarter of an hour at most.

Suspecting that, although all the other symptoms of the ague had ceased for

some time, this convulsive affection of the stomach might somehow be connected with it, the medical attendant administered a large dose of quinine in an enema. A few hours after it was given the hiccup ceased almost entirely; but it again returned, as violent as before, next day. The quinine was again ordered, and with equally happy effects; and, by persevering in its use for a few days, the symptoms did not return.—Journal des Connois. Med. Chir.

### Walnut-leaf Tea, a good remedy in Scrofulous complaints.

PROF. NEGRIER of Angers, a respectable authority, has for some years past been trying the effects of an infusion of the leaves of the walnut tree in a variety of scrofulous maladies, and the results of his experience have led him to form a most favorable opinion of it as an antiscrofulous remedy.

He reports a great number of cases of disease of the lymphatics, with or without ulceration of the integuments, of scrofulous ophthalmia, of affections of the bones and periosteum, &c., in which decided and very marked benefit was obtained from a course of this simply prepared tea. A handful of the fresh or slightly dried leaves may be added to a pint of boiling water, and of this infusion a small cupful may be taken twice a day. An extract may also be prepared by evaporation, and this Dr. Negrier recommends to be given at the same time, either in the form of pills or of a thick syrup. A strong decoction of the leaves he has used with excellent effects as an application to scrofulous ulcers.—Archives Generales.

## On Chorea. By B. G. BABINGTON, M.D. F.R.S.

Dr. Babington remarks that, previous to Dr. Hall's researches, the proximate cause of chorea was supposed to consist in debility, and some degree of irritation of the organic class of nerves, extending more or less to those of volition, and occasioning morbid susceptibility of the nervous system generally, with diminution of power, increased mobility, and irregular actions of the muscular system, particularly of those muscles supplied with the nerves principally affected.

Let us contrast this loose and general account of the pathology of chorea with that offered by Dr. Marshall Hall. He first maintains, as principles of physiology, that, besides the contractile power in muscular fibre itself, there are three causes of muscular motion:—1st, Volition; the seat of which is the cerebrum, and the action of which is conveyed along the fibres which decussate in the medulla oblongata. 2dly, The direct and reflex action of the excito-motory system. And 3dly, Emotion. He affirms that the seat of emotion is below that of volition; is in the medulla oblongata, and acts along fibres which probably do not decussate; and that the seat of the excito-motory system is in the spinal cord. He further remarks that volition has an aim or object; while emotion, and the excito-motory function (or vis nervosa of Haller), are aimless on the part of the individual, and frequently opposed to volition.

According to Dr. Hall's earlier papers, chorea was considered an affection of

the true spinal system; affording an example of the want of harmony between the cerebral and the true spinal acts. The volition was affirmed to be normal; but the true spinal acts to be abnormal, for want of a precise harmony between the two. This view, however, did not account for the absence of chorea during sleep; for it is one characteristic of the excito-motory function, that it goes on during sleep; so that a disease asserted to be dependent on a morbid condition of that function, ought to be at least as manifest during sleep-when volition, as a disturbing cause, is abstracted—as in the waking state: but the contrary is notoriously the fact; all the symptoms of chorea ceasing as soon as the consciousness of the waking state is suspended. It was necessary, therefore, to seek further for an explanation of this circumstance. "It is well known," says Dr. M. Hall, "that the irregular movements in chorea, and in incipient paralysis agitans, subside during sleep. I was long perplexed to account for this fact. It was only by observing that these movements subside during quiet sleep only, and return during the agitation of dreaming, that I perceived that it is not sleep, but the absence of emotion, to which this effect is to be ascribed; dreams during sleep having the same effect as emotion in our waking hours." This, then, I take to be his view of the pathology of chorea—that it is a morbid condition of the organ of emotion, which has its seat in the medulla oblongata, and is wholly independent either of the brain or the ganglionic system.

Dr. Babington adds:

"I should define chorea to be a disease characterized by irregular uncontrollable contractions of the voluntary muscles, alternating with their atony, and occurring without pain. I have used the word 'contractions,' and have included the atony of the muscles in this definition, because the movements in this disease appear to me to differ essentially from those of convulsions and epilepsy in this-that the stimulus, whatever be its nature, which excites either the whole or a portion of the voluntary muscles to involuntary action, is not more violent in degree than the normal stimulus of the will, or of the excito-motory system; so that movements, almost incessant indeed, but not exaggerated like spasms, are the result. It will illustrate my meaning to state that a person in sound health could, at any one moment, perfectly imitate, by an exercise of the will, every movement which he would involuntarily perform if he were the subject of the most aggravated form of pure chorea. Again, there is another circumstance which seems to me to attend the movements in chorea, and which may furnish ground of distinction between this and truly spasmodic seizures. The nerves, in their normal state, are always exercising a certain amount of influence over the muscles; so that where there is antagonism of forces it is only necessary to remove the one opponent in order to demonstrate that the other is in a state of activity. This being the healthy condition, we have a right to consider the diminution of this activity as a morbid state; for although, from the striking effect which a morbid exaltation of muscular force produces, spasm is more directly brought to the cognizance of our senses than atony, still the latter is no less a really morbid condition than the former. I venture, then, to express my belief that, while in true convulsions the muscles, after having been thrown into a spasmodic state, do only return to the normal condition, in chorea, on the contrary, a further diminution of nervous influence occurs; so that the muscles become, in all marked cases, entirely passive and inert in the intervals between their irregular and involuntary actions. This is manifest from the manner in which the limbs drop from the position into which they have been thus thrown; in which the head, after being tossed to and fro, will fall passively on the shoulders, and from the incapability on the part of the patient to hold any thing in his grasp."

Dr. Babington offers a good account of the history and symptoms of chorea. And his allusion to the exciting causes of the complaint is lucid. If we affirm, he says, that the primary seat of chorea is in the medulla oblongata and spinal marrow, we must at the same time admit that this may be affected through the medium of its connection with the sensorium on the one hand, and with the ganglionic system on the other. Its exciting causes will thus naturally divide themselves into three kinds; namely, 1st, Those which primarily affect the spinal system: 2dly, Those which secondarily affect it through the sensorium: 3dly, Through the ganglionic system. Blows on the head or neck, causing a contrecoup, which shall either structurally injure or functionally disorder the medulla, occasionally give rise to chorea, not only at the time of their occurrence, but at uncertain periods afterwards: so also injury of the spinal marrow, by direct compression; alteration of its structure by rheumatism; and perhaps its irritation, by certain injurious practices;—the irritation of the incident nerves, by a wound, by the poison of mercury, of lead, of strichnine, and by skin diseases. Of those causes which act primarily on the sensorium, by far the most frequent is an affection of the mind, arising from any of the depressing passions; as from sudden fear, from horror, from grief. Perhaps, however, these causes should be rather considered as of the first kind, if the theory be adopted that the seat of emotion is in the upper part of the spinal cord, and not in the brain. Other causes more evidently first affect the sensorium; as organic diseases of the brain, fever, epilepsy, hysteria, and mental alienation. Of those causes which act primarily on the ganglionic system, may be enumerated costiveness of bowels, with morbid accumulations in them, and worms of different kinds. Rheumatism also, when it affects the heart and pericardium, may give rise to the disease, through the irritation of the plexus and ganglia, which so entirely surround that organ, and the origin of its great vessels; and irregular menstruation may produce a like effect through the lumbar plexus.

In a note, we find the connection between chorea and cardiac affections noticed still more pointedly. We transcribe the note in question.

"Out of a very large number of cases of chorea seen lately by my friend and colleague, Dr. Addison, to whom I am indebted for having first directed my attention to this point, only two have been without a decided mitral or left ventricular bruit. In these two there was diseased heart; and in one case, examined after death, there was found old thickening of the mitral valve, with very recent pericarditis. Should further investigation prove chorea to me more immediately dependent on disease of the heart or pericardium, than has been hitherto supposed, the merit of the discovery will certainly be due to Dr. Addison." But we cannot help suspecting it will turn out otherwise.

Dr. Babington relates twenty-five cases, none of which require notice. The gist of the matter, the treatment, is thus handled:

He has not found any one remedy so superior in efficacy to the rest as to induce him to abandon all others in its favor. On the contrary, the most powerful will sometimes disappoint our expectations; and we are then obliged to try one after another; and in the end, perhaps, remain uncertain, should the patient do well, whether the recovery is to be attributed to the means employed, or to the power of nature herself. Dr. Babington, therefore, treats the cases rationally.

Where there is evidence of congestion in the head, marked by giddiness and headache, occurring in subjects of a full habit and florid countenance, the treatment should be commenced with moderate depletion; which, however, it would be more advisable to effect by leeches or cupping-glasses, than by the use of the lancet; and these should be applied to the nape of the neck, or behind the ears. Attention to the state of the bowels is of course, in all cases, indispensable, even though the general treatment should be of a tonic character: but wherever there is reason to suspect that the symptoms are dependent on a constipated or loaded state of the bowels, or their irritation from the existence of unwholesome aliment, purgatives should be administered freely and frequently; and those of the more active kind should be employed. As this state of the prima via exists in a great many cases, it is not difficult to understand why the purgative plan of treatment has proved frequently successful. Where worms, and especially tænia, cause the irritation, turpentine and other anthelmintics will prove most successful; and these cases also will swell the list of those who will be benefitted by brisk and repeated purgatives.

Where there is reason to think that the disease is connected with the state of the uterus, occurring about the period when the catamenia should appear, and combined with symptoms of hysteria, those remedies will naturally suggest themselves which have a special power in causing this discharge, in obviating its irregularity, and in correcting its unhealthy character. The state of the teeth should also be looked to about the period of the second dentition; and even on the cutting of the dentes sapientiæ, as a probable source of irritation;—and the gums should be lanced, or the decayed roots of the first set removed, according to circumstances.

Where the disease has arisen from a metastasis of rheumatism to the fibrous structure of the theca of the cord, it ought to be treated in the same way as pericarditis,—by depletion, general or local, antiphlogistics, and the employment of mercury, carried to slight salivation.

The following are Dr. Babington's opinion on the subject and comparative value of tonics.

"In a very numerous class of cases which owe their origin to sudden emotion, producing a strong impression upon a weak and excitable nervous system, the patient will be most benefitted by all those remedies which improve the general health, and give vigor and tone to the nervous and muscular systems. The most severe case I ever saw recover was cured in a few days by divided doses of Port wine, in which enough of sliced rhubarb was steeped to render it gently aperient. Various vegetable tonics have had their advocates; but bark and sulphate of quinine may be taken to represent them all. The metallic salts and oxides have, however, of late years, been generally preferred. Sesqui-oxide and sulphate of iron, sulphate of copper, oxide and sulphate of zinc, nitrate of

silver, and arsenite of potassa, have all been tried, and found, in different hands, to succeed. The testimonies in favor of sesqui-oxide of iron in large doses, and of sulphate of zinc, are perhaps the strongest. On the latter remedy I have generally, in the cases which I have just alluded to, most relied: and my expectations regarding its efficacy have seldom been disappointed. I have found it necessary to administer much larger doses, however, than are usually given; good effects seldom being perceptible until twelve or fourteen grains are taken three times a day. By gradually increasing the quantity a single grain at a time, even much larger doses than this may generally be employed without exciting sickness, and with the best effect. I have known half-drachm doses, thrice a day, taken for several weeks in succession.

Sulphate of zinc, however, will not be borne by all stomachs, even in small doses; and we are then obliged to give up its employment, long before we have attained even the minimum dose requisite to give it a fair chance of controlling the disease. In such cases I generally have recourse to the liquor potassæ arsenitis, cautiously increased in its dose from three to twelve or fifteen minims, according to the age and strength of the patient, and other concomitant circumstances. I believe this is the most powerful remedy of all, at least I have found it so in several obstinate cases; but I am deterred from employing it, where other remedies will succeed, from the sickness and griping pains which it is apt to cause, and from some fear that the constitution may be permanently injured by its continued employment.

As an external remedy, the shower bath may be very often advantageously used, in conjunction with internal means; and I have even tested its efficacy with success when used alone. In St. Petersburg, I am informed by a Russian physician, a new practice has within the last year been adopted with eminent success in obstinate cases of chorea. The patient is placed in a bath as hot as he can bear it; kept there for half an hour; and, when thus thrown into the most profuse perspiration, is suddenly plunged into cold water.—I have not ventured to try this method of producing a sudden shock; or rather I should say that opportunity has been wanting since I have been made acquainted with it; but in an extreme case, and when other remedies had failed, I should, on the testimony I have received in its favor, not hesitate to employ it.

The treatment by electricity is very advantageously revived at Guy's hospital. We have given an account of Dr. Golding Bird's paper upon this subject.—Medico-Chirurgical Review.

#### SURGERY.

Mode of passing the Ligature for Popliteal Aneurism.

In a case in which Mr. Cooper tied the femoral artery, instead of the usual mode, when the artery is exposed, of drawing the saphenous nerve outwards, and then passing the aneurismal needle, armed with the ligature, between the artery and vein, Mr. Cooper adopted the following plan:—Immediately on opening the sheath he passed an aneurismal needle, unarmed, below the whole of its

contents, from without to within, and to such a distance that its curved extremity appeared close to and on a level with the upper and inner edge of the artery. There were two branches of nerves in this case, running along the upper surface of the artery: having gently detached these by means of the blunt edge of a small probe, Mr. Cooper "tilted" them over the exposed end of the aneurismal needle; on which, therefore, remained lying only the artery and vein. Between these Mr. Cooper now insinuated the end of the probe; and through the space thus made passed the needle, having removed it cautiously from its former situation. In this situation the needle was armed by an assistant, and the ligature then secured in the usual way. This method appeared to place the separation of the artery from the nerves and the vein more under the command of the operator, while it caused the least possible disturbance to its cellular attachments.

"I may remark," says Mr. Cooper, "that the position in which the thigh is placed before the operation, is of great importance in reference to the subsequent passage of the ligature. By the full rotation of the thigh outwards, and by the bending of the leg, all the muscles are relaxed; and by a pillow being placed under the leg the patient is freed from the apprehension of moving the limb, and thus interfering with the operation. In regard to the direction of the incision necessary to expose the artery, there is no doubt that, as a general rule, the inner edge of the sartorious muscle is the best guide; but frequently in cases where, from ædema extending over the thigh, this edge cannot be distinguished, a line may be taken from the centre of Poupart's ligament to the inner side of the patella, and the point at which it is intersected by another line, taken from the anterior superior spinous process of the ilium to the tubercle of the inner condyle of the femur, marks the spot at which the ligature should be applied. The artery, in the case in question, was, as before narrated, seen pulsating on its exposure; but I may state—though to many the remark will be superfluous—that this is far from being uniformly the case. I have seen even the carotid lie so perfectly quiescent after exposure, that a surgeon has thought, from the total absence of pulsation, that it could not be an artery. The whitish-colored vessel which is exposed in these operations is only discovered to pulsate by being pressed between the finger and thumb. From the details in Case No. 2, I think that the advantage of passing the needle before it is armed with the ligature, is sufficiently shown. It is necessary to take great care that the point of the needle be not too sharp, or there will be considerable danger of wounding the vein whilst the needle is being passed between it and the artery. As to the tightness with which the ligature should be drawn, the surgeon should exercise his discretion, and is best taught by experience. It is frequently stated that the inner and middle coats of the artery should be felt by the operator to give way under the ligature; but, in a very great majority of cases, I have not been able to detect any thing of the sort. In old persons, where the coats are more likely to be indurated or ossified, a less degree of force will of course be proper. In Cases Nos. 2 and 3 the patients were sensible of an injury at the moment at which the aneurism may be supposed to have originated; and the same remark applies to the following case, No. 4. This is an unusual circumstance."

#### Case of Ligature of the Common Carotid Artery.

The Rev. Mr. ——, aged 34, a native of Barbadoes, having lately arrived from that island, made application to Mr. Cooper, on June 30th, for the cure of an aneurismal tumor on the right side of his face.

The tumor was about the size of a small walnut, deeply imbedded within the substance of the parotid gland, and placed close to the neck of the lower jaw, apparently in the exact situation of the division of the external carotid into the temporal and internal maxillary arteries. Its pulsation was very perceptible to the finger; but not so readily to the sight, from its being covered by the parotid gland. On applying the ear, the peculiar whiz characteristic of aneurism was distinctly perceptible. By pressure on the common carotid artery, not only this, as well as the pulsation, ceased, but the tumor itself entirely disappeared: the pressure being removed, it most rapidly resumed its former position and appearance. On depression of the lower jaw the prominence of the tumor was no longer discernible. This state of things had led to no inconvenience whatever to the patient, for he apparently performed every function as naturally as if entirely free from disease.

The tumor had first been noticed accidentally about a twelve month previously. Mr. Cooper, as well as Sir B. Brodie and Mr. Liston, recommended an immediate operation. It was performed at half-past 2 P. M. on the 7th of July.

An incision about two inches in length was made, commencing on a level with the middle of the thyroid cartilage, along the inner side of the sterno-cleidomastoideus muscle, but nearer to the median line than usual. A small superficial artery was divided and secured: there was not much venous hæmorrhage. A quantity of cellular tissue being divided, the omo-hyoideus and sterno-hyoideus muscles were exposed; and the artery was felt pulsating at the bottom of the wound, which appeared very deep. The omo-hyoideus being then drawn downwards and inwards by means of an aneurism needle, and the neck a little relaxed so as to bring the parts better into view, the sheath was cautiously opened, as much to the inner side as possible. The artery was thus exposed. There was no obstruction from any swelling up, or overlapping of the jugular vein, which did not, in fact, present itself to view. An aneurism needle, unarmed, was then passed beneath the artery; upon which, at the time, a small nerve was lying: and when this had been carefully detached for a small distance, by means of a blunt silver probe, the needle was armed with the ligature. One end of this was now passed between the upper surface of the artery and the small nerve already spoken of; and this being held securely, the other end was drawn out, together with the aneurism needle, from beneath the under surface of the vessel. The effect produced on the tumor by pressure on the artery was observed; and being found to be satisfactory, the knot was made. The aneurismal sac immediately became flaccid, and yielded entirely to pressure. The wound was closed by two ligatures and adhesive plaster, and the patient placed in bed, with his head raised and neck relaxed.

During the operation he displayed unusual fortitude and submission; neither disturbing the parts about the throat by uttering exclamations, nor offering resistance by struggling. Towards the latter part of the operation, prior to the liga-

ture being put round the artery, he once or twice coughed, with a peculiar barking sound; but this was evidently involuntary.

The right side of the face was cold for that day. Every thing went on well. The ligature did not separate until the 10th of August, when the report goes that the facial and temporal arteries on the right side of the face appear to be obliterated. There is no perceptible difference in the vessels on the opposite side.

The patient mentioned a curious circumstance. He asked if he had been observed to make, during the operation, a curious noise, like the bleating of a goat; and said that it was quite involuntary, and was attended with a curious sensation, as of some one squeezing the lower part of his throat, and also a sudden sense of weight at the stomach and a disturbance in the bowels, so that he was for a minute or two afraid he should not be able to retain his fæces. These sensations, together with a general sense of faintness, occurred at the same instant; and, he said, seemed to depend on Mr. Cooper's pushing aside something with his finger in the wound. No doubt this was the nervous vagus. Mr. Cooper makes a remark on the method of operating, which we think is of importance.

"The patient being placed in the recumbent position, I commenced my incision more to the inner side, or towards the sterno-thyroid muscle, than is usually recommended, with a view, upon opening the sheath, of more immediately exposing the carotid artery; being convinced, from examination, that the usual direction given to cut down along the edge of the sterno-cleido-mastoideus muscle leads rather to the jugular vein than to the common carotid artery. This conviction seems verified by the fact that most authors, in their description of this operation, speak of its difficulties principally arising from the distention and rising of the jugular vein, a circumstance which not only did not occur in this instance, but the jugular vein was not even brought into view, nor did it in any way interfere with the application of the ligature. The only difficulty I met with was from the depth at which the vessel was placed from the surface, and of which the appearance on the dead subject offers no criterion. Having made the opening into the sac so much on the inner side for reasons already given, this depth of the vessel offered impediment to the ligature being passed, as usual, from without inwards, but readily permitted its passage from within outwards; a mode which is equally safe, if the forefinger of the operator is placed so as to protect the vein from any injury from the point of the needle. I armed the aneurismal needle, as I always am in the habit of doing, as the needle passes so much more freely without than with the ligature. The patient seemed not to express pain from the tightening of the ligature at the moment; nor did he afterwards exhibit any indications of suffering from the sudden change of circulation to the brain."

Concussion of the Brain is thus alluded to by Mr. Cooper. "When one or both pupils remain contracted, I am induced, from my experience, to consider this as an unfavorable symptom, characterizing lesion of the brain. In those cases in which I have observed contraction of one pupil, and have had an opportunity of making a post-mortem examination, I have invariably found injury of the brain on the side opposite to that of the contracted pupil. The same violence which

produces concussion may cause fracture of the base of the scull: and although the constitutional treatment employed may subdue the symptoms of concussion, during the progress of reparation, effusion may take place, and evidences of compression supervene. Such a complicated injury, however, is generally denoted by bleeding from the ear, at the time of the accident; and I have known a discharge of serum from the external meatus continue for many days after the accident; and yet these cases ultimately did well. Even when this discharge is profuse, it is to be regarded as a favorable symptom, and therefore should not be checked by astringents. The case above alluded to was treated successfully, by general and local bleeding and calomel."—Medico Chirurgical Review.

Account of a Patella broken transversely, and re-united by Bone. With Remarks on the Nature and Treatment of similar Injuries. By T. WILKINSON KING.

It would seem that this was an instance of bony union of a transversely fractured patella. The points of Mr. King's remarks are these.

"If the reparative ossification is to be expected mainly on the convexity of the bone, and if this action is regulated by the degree of inflammation, I have to ask, if it be well to subdue the little undue vascularity which quickly follows the injury? And, in order to enforce the reflection, I would almost say, it is desirable to consider the means of exciting and maintaining inflammation on the surface of the patella, rather than strive to obviate the injection, which is too limited, and so superficial as to be peculiarly under the control of topical remedies.

In the absence of experience, I am not inclined to think that abstaining from the application of cold, or even attempts to excite capillary action, will be often found to succeed in uniting the fragments of a patella by bone: but I do consider that the habitual use of cold, in the main, is a needless, mistaken, and pernicious practice; and that some aid is decidedly to be looked for from an opposite method."

"The limb is doubtless to be kept extended and even, as much as may be inclined to form a right angle with the body: but when our minds turn to the means by which the upper fragment is to be drawn down and confined, it should, I think, be difficult to avoid the conclusion, that every thing in the shape of a close-fitting circular strap must be, comparatively, inconvenient, inefficient, and obstructive; producing needless pressure, requiring excessive violence, and causing mischievous congestion and unhealthful actions.

All these influences may, I conceive, be pretty readily obviated by an application of a modified character—a solid pad, long and narrow, and curved along the upper edge of the patella. A torniquet so formed, capable of well-graduated pressure, and applied somewhat obliquely and firmly, but without any circular or constricting bands, would, I imagine, act more completely, and with the least necessary violence, without congestion, or any needless obstruction to the nutrient and reparative actions.

It is not now needful to inquire what force is requisite to resist the efforts of the extensors to displace the bone. Doubtless it is desirable to employ the least violence that will be efficient and secure; and my conviction is, that very slight force will suffice, provided the muscles are carefully set at rest, by attention to the patient's posture; and kept unexerted, by studious absence from all motion: for the patient's exertions in bed, even with the most precise application of straps, &c. (unless they are so tight as to be very distressing) cannot fail to act upon the injured bone."—Medico Chirurgical Journal.

Cases in which the Parotid Gland was successfully Removed. By George Bushe, M.D.

An undue respect for authority has created, in our profession, more evils than the effrontery of empirics. Every person should feel disposed to venerate talent; but none ought to receive maxims, even from the wisest, without the strictest scrutiny; for it is an undeniable assertion, that a man of modern parts and acquirements may, in a great many instances, not only detect errors in the productions of his superiors, but even be capable of correcting them. If all modern surgeons had prudently reasoned after this fashion, we would not have heard so much about the difficulties, nay, impossibilities of removing the parotid gland. To be sure, Allan Burns, Colles, and Harrison, have argued about the dangers and fatal consequences inevitably connected with such an operation: but Beclard, by the safe removal of this gland, proved their assertions to be futile.

It has fallen to my lot to have successfully performed this operation three times, and as every case tending to confirm the propriety of a procedure in practice, denied by some, doubted by others, and only admitted by a few, becomes important to the community, I shall briefly sketch those to which I allude.

Dec. 10th, 1827. Henry Hessender, æt. 24, robust and in good health, has a tumor of the left parotid gland, as large as the fist, hard, irregular on the surface, nearly immovable, and attended with lancinating pains. He cannot open his mouth for more than three-quarters of an inch, nor masticate with any degree of facility or comfort. The tumor has forced the ride of pharynx before it, and projects considerably into the fauces. The disease succeeded to a severe cold, and commenced about two years since.

14th. At his and his friends' desire, I operated this day as follows:—Ist. I made a crucial incision over the tumor, and carried the perpendicular section for an inch and three-quarters below the gland, and in a line corresponding to the anterior edge of the sterno-mastoid muscle. 2d. I reflected the flaps. 3d. I had the lower angle of the wound divaricated by narrow curved retractors, and the tumor carried upwards and outwards by a double hook, while I dissected inwards, dividing in succession the nervous ascendens colli, parotidean vein, and stylo-maxillary ligament. 4th. Being now better able to retract the sterno-mastoid muscle, I soon brought into view the posterior belly of the digastric, along which I cautiously dissected till I exposed its tendon and the inferior part of the stylo-hyoideus. 5th. I had the posterior belly of the digastric carried downwards and outwards by a blunt hook, while I dissected on, secured with two ligatures, and divided between them the external carotid artery. 6th. I detached the tumor from the sterno-mastoid muscle, mastoid process, and concha of the ear, (in which dissection the arteria posterior auris was divided and immediately secured.) 7th.

I tied with two ligatures and divided between them, the trunk of the temporal artery, and carried the dissection along the anterior edge of the gland, dividing the brances of the external respiratory nerve\* and the Stenonian duct, until I had elevated it from the anterior surface of the masseter muscle, and posterior edge of the ramus of the inferior maxillary bone. 8th. I fixed two double hooks, one on the anterior, and the other on the inferior part of the gland, then, with his head inclined to the affected side, I had the diseased mass carried upwards and backwards, while I lacerated its cellular connections with the handle of the knife until I exposed the internal maxillary artery, which I soon tied and divided. 9th. The gland was separated from its bed by the use of a silver-bladed knife.

The angles of the wound were united by adhesive plaster, and the central part dressed from the bottom.

The operation lasted one hour and three quarters, and the patient, though much exhausted, did not lose more than six ounces of blood.

B Tincturæ Opii, Zi.

Aquæ Menthæ Pip. Zj.

Fiat haustus statim sumendus.

8 o'clock, P. M. Has slept three hours-does not suffer pain-is inclined to slumber.

B Tincturæ Opii, gtts. xxv.

Aquæ Menthæ Pip. Zj.

Fiat haustus statim sumendus.

Lemonade.

Slept five hours—some fever—pain of head and stiffness of the neck. 15th.

V. S. ad Zxx.

Inj'r Enema Com.

App'r Lot. Spirit. Camph. p. d.

Rep'r Haustus Anodynus ut antea.

Lemonade.

16th. Passed a good night—headache has subsided—less fever, pain, and stiffness of the neck.

Cont'r Lot. Spir. ut antea.

17th. Complains only of pain in the neck and difficult deglutition.

18th. Do.

19th. Wound dressed-angles united-superficial dossils only removed.

All the dressings removed—healthy suppuration established.

Rice and milk.

The reports subsequently made on this case are devoid of interest, save, that on the tenth day he left his bed; on the eighteenth he went out, and on the thirtysecond the wound was healed.

The disease has not since returned; but the paralysis of his face continues.

On examining the tumor, the external carotid, internal maxillary, and temporal arteries, were found imbedded in it, as also the plexus of the portia dura. The

<sup>\*</sup> Paralysis immediately succeeded the division of these branches.

nervus ascendens colli and parotid vein entered its lower part, while the Stenonian duct and socia parotidis were attached to its anterior part. It was of a whitish yellow color, as hard as cartilage, and contained four cells, varying from the size of a pea to that of a filbert, and filled with a thick pulpy substance. Finally, it was surrounded by a dense fibrous capsule.

The next case was that of Mrs. B., a delicate woman, æt. 26, in whom the right parotid gland was as large as an orange, hard, irregular on the surface, nearly immovable, attended with dull pain, and liable to inflammatory attacks, projected into the fauces, and rendered mastication and deglutition difficult. The disease was of three years standing, and commenced without any known cause.

I successfully removed the gland in one hour and sixteen minutes, and without more than the loss of four ounces of blood. The method pursued in this operation was exactly similar to that adopted in the case just described, with this exception, that before the diseased mass could be sufficiently retracted to enable me to expose the internal maxillary artery, I had to cut away its posterior part.

The wound healed kindly, the disease has not returned, and she enjoys good health. The paralysis of the right side of her face continues.

The gland was of cartilaginous density and yellow color.

The last case was that of Mr. M., between 22 and 23 years old, small stature, but good constitution, who labored under enlargement of the left parotid gland for nine years. The tumor was about the size of the fist, hard, immovable, with a cicatrix on the surface, caused by escharotics applied a few months previously by a noted empiric, from which time it grew rapidly, and was attended with severe lancinating pains. He could not open his mouth for more than half an inch, his mastication and deglutition were much impaired, and the tumor extended half way across the fauces. He could assign no cause for the disease. All the usual remedies had been employed without any benefit.

On the 16th of September, 1830, I removed the diseased gland. I pursued the course detailed above, but the operation was more difficult, in consequence of the strong adhesion of the gland to the mastoid process of the temporal bone, which was in a state of caries. In consequence of the adhesion just mentioned, I had to use, particularly towards the close of the operation, considerable force to dislocate the diseased mass.

The operation lasted for one hour and thirty-six minutes, and my patient was much exhausted, though he did not lose more than three or four ounces of blood.

The wound granulated from the bottom, and healed, save a fistulous opening communicating with the carious bone, in four weeks. The fistulous opening disappeared in two months. He is now in perfect health; but before I close I must mention that in April last he called on me, in consequence of a tubercle lodged in the substance of the cheek, at the anterior edge of the masseter muscle, corresponding to the anterior extremity of the incision. This little mass has remained stationary ever since. It may have been developed in the extremity of the duct; however, as it neither incommodes him, nor grows, I have not thought proper to remove it, an expedient which can be easily accomplished if necessary. The left side of his face continues paralysed.—New York Lancet.

#### Lithotrity.

THE following remarks on the removal of stone in the bladder by the operation of lithotrity, are the concluding part of a review of several works upon this subject in the last No. of the British and Foreign Medical Review.

The conclusions to be drawn from these cases and these views are obviously melancholy enough in so far as lithotrity is concerned. And yet, when we reflect dispassionately and as physiologists and practitioners upon the nature of the entire process in this operation, we see it impossible that the results could have been very different from what they are. Let us only consider the immediate consequences of the successful administration of lithotrity, the searching for and seizure of the stone, the necessary violence that accompanies the act of its comminution, and its condition with reference to the bladder after having been reduced to pieces, and we perceive that in the nature of things it can be no trifling operation, that on the contrary it must needs be one fraught with much danger to the patient. We know that the mere act of searching the bladder with a polished sound is often accompanied by a great amount of pain, and followed by what appears a singular degree of sympathetic disturbance; we know that the attempt to seize and extract small stones in the bladder by the most delicate forceps has ended fatally; and how shall the necessarily large and complicated implements of lithotrity be introduced and brought into play within the bladder without producing a hundred times the amount of excitement and of mischief? This cannot be, and is not. And then, what shall we say in regard to the jarring and violence inseparable from the process of working a drill, or of turning a screw, or of giving the whole apparatus a smart blow with a hammer? What of a stone, which with a smooth surface was already such a source of suffering as to make the possessor weary of his life, and willing to take the chance of any odds against the solitary hope of obtaining relief, either roughened by repeated perforations, or reduced perchance into eight or ten angular and ragged fragments? All we can do is to admire the powers inherent in the delicate tissues that compose the excretory portion of the uropoietic system to withstand violence, and to repair themselves, bruised and maltreated as they necessarily must be, in such an operation as lithotrity performed by the most gentle hand.

The singular increase of irritation that takes place in consequence even of the spontaneous breaking up of calculi in the bladder, a phenomenon which sometimes occurs, and the danger to life that ensues thereon, is strikingly illustrated by the circumstances and the issue of a case which is related by Mr. Liston. A medical man, who had labored under symptoms of stone for a great may years, and who by sounding himself had ascertained the existence of a stone in his bladder ten years previously, was one day met by Mr. Liston in consultation. In three days after this Mr. Liston was summoned to this unfortunate gentleman in a moribund state, from inflammation of the whole urinary system, his urethra being at the same time blocked up by large fragments of stone. "It appeared," says Mr. Liston, "that on parting with me he had been summoned to an urgent case of labor. He ran quickly down a steep street, and at the bottom of it was seized with an urgent desire to make water, which he did in small quantity mixed with

much blood. He passed some pieces of stone with sharp angles. He went on from bad to worse; he had retention, and the urethra was found much obstructed; suppression followed, and death terminated his sufferings in a few days. Many portions of the calculus were voided; much stone with the nucleus occupied the bladder and urinary passage. The kidneys were dark colored, and one approached to a gangrenous state."

Now it is the business of lithotrity by a certain amount of mechanical violence, less or more, to accomplish such a disruption of a calculus as took place here spontaneously; and our amazement finally comes to be, how the operation should ever succeed, not that it should so often be found either impracticable, or, if persevered in, fatal. And this leads us immediately to consider the circumstances in which the operation is admissible, and those in which it is inadmissible. This point is soon discussed; the conclusion lies on the surface, and wants no farther fact or argument, after what has been said, to make it clear. Lithotrity is admissible and only admissible in cases in which the bladder is perfectly healthy, and in which the stone is small, of the size of a filbert, a shelled almond, or it may be a nutmeg at the most; under all other circumstances it ought to be held impracticable. In other words, lithotrity is admissible where it is estimated that the stone can at one sitting be seized and reduced to fragments of sufficient minuteness to be passed by the urethra. No second, certainly no third operation ought ever to be contemplated. If the patient who has had lithotrity performed upon him is not relieved at once, he is in imminent danger of losing his life.

Lithotrity may now fairly be said to have been tried and found wanting as a general means of relief for stone. Restricted to the circumstances indicated above, it is a great addition to our chirurgical therapeia; applied indiscriminately, and as a substitute for lithotomy and all other means of treating stone in the bladder, it is a most fatal present made to humanity.—Boston Med. and Surg. Journal.

On the Treatment of Varicose Veins by the Needle and Twisted Suture. By T. B. Peacock, Esq., Edinburgh.

Considerable doubt prevailing in the minds of many practitioners as to the safety and efficiency of the plan of treating varicose veins by the needle and twisted suture, I beg to offer the following remarks on the results of its application in cases which have fallen under my notice.

I was first led to make trial of this plan from reading the report of a case by Mr. Melvin, in the No. of the London Medical Gazette for July 7th, 1838, and I have since applied it myself, or seen it made use of by the surgeons to the Chester Infirmary, in at least thirty cases, of several of the most important of which I have retained notes. The plan adopted has been that recommended in the paper referred to, of passing a common curved suture needle under the vein, constricting it with a thread in the figure-of-8 form, and having turned the needle on its side, retaining it there by straps of adhesive plaster: at the end of two or three days, the ligature, if only moderately tightened at first, will require to have a fresh one passed over it; and in two or three more the needle may be removed. Several different methods have been proposed for effecting the obliteration of the

vein by the needle; but this, which was originally introduced by Velpeau, as being the most simple, is that which I have always adopted. The length of time which it will be necessary for the needle to remain will depend on whether it is intended simply to excite suppuration, or to ulcerate out; the last being the course which I have usually followed, as in one or two instances, in which the needle was withdrawn after exciting suppuration, the obliteration of the vein was found not to have been effected. This plan has, however, been objected to as leaving a sore difficult to heal afterwards; but in only one instance have I seen it attended by any such result. For the needle to ulcerate its way out, the time usually required will be from a week to ten days; but it will vary greatly according to the state of the part in which it is applied: in the immediate neighborhood of an ulcer, where the skin is thin and inflamed, a day or two will often suffice to commence the ulcerative action, and three or four for the needle to escape; while, when inserted some distance from the seat of disease, and beneath sound integument, the process will require ten days, a fortnight, or even longer. Thus, in a case lately under my charge, where the needle was inserted beneath a tender sinus on the instep, leading to a small ulcer about an inch above, it ulcerated out in three days: while at the same time, in another case, a needle was placed under each saphena, and one beneath the common vein, at their point of union; the needle on the anterior branch was not removed till the twelfth day, and the other two not till the nineteenth. I have since seen two instances in which the needles were retained till the end of the third week. Generally speaking, when inserted over a bone, they excite ulceration more rapidly than when upon soft parts; and I am inclined to think that, in the last situation, they are more apt to give rise to an undue degree of inflammation; at least, in the only two cases in which their application was followed by troublesome abscesses, they had been inserted beneath sinuses in the calf of the leg. Considerable pain is sometimes excited by the operation, but it usually soon subsides; and I have not, in any instance, known tenderness to extend in the course of the vein above two or three inches from the point of constriction; and in none has it resisted ordinary treatment: indeed, in no instance which I have seen have any serious symptoms resulted from the operation.

The cases in which I have found this treatment applied have been in small irritable sores remaining after the bursting of large varicose sinuses, inveterate ulcers connected with a generally enlarged condition of the veins of the limb, and ædema of the leg and ankle, either simple or attended with a serous discharge from the skin; and in all of the cases but two in which I have seen it had recourse to, the results have been most satisfactory; and in these, as only one needle was inserted, and other sinuses were left unobliterated, success was hardly to be expected. The number of needles which I have generally seen inserted has been three or four in each limb, but, in some instances, five or six have been applied; the rule adopted having been generally to insert in a case of varicose ulcer one under each enlarged vein an inch or so below the ulcer, and again on each trunk a few inches above it, selecting for the points of their insertion the largest sinuses. Sometimes I have adopted the plan mentioned by Mr. Dodd, of placing on each vein two needles an inch or an inch and a half apart, so as to effect adhesion of the sides of the intervening tract; and in these cases the main

trunk will, after the cure is effected, be often found contracted to a firm cord up to the point at which the next large vein communicates with it; while, where a single needle only is inserted, the portion of the sinuses around is often not affected by the operation.

The effect produced on the sore by the obstruction to the course of the large veins in connection with it, is often most rapid; the inflamed margin gradually subsides, the edges become depressed, granulations spring up, and cicatrization quickly proceeds; and sores which have been liable to bleed entirely lose that tendency, the granulations becoming firm. I have, however, observed what has been noticed before by Mr. Dodd, that the healing process was not equally rapid throughout, the good effect produced by the needles sometimes gradually subsiding, and considerable difficulty being experienced in obtaining the entire healing of the sore.

In this way ulcers which had long been under treatment, without deriving any advantage, have, in several instances, been cured, and others which were found to return as soon as the patient resumed his work, have, by the aid of a laced stocking, been kept healed; indeed, not only does it appear to be a rapid method of effecting the cure of these cases, but I am inclined to regard it as also a more permanent one. The first case in which I made trial of the practice was one of ædema of both legs, attended with excoriation of the skin, and a fætid discharge, connected with a very varicose state of the large veins. The man, by trade a rope-maker, had been repeatedly under treatment before with very partial benefit; and no sooner did he resume work than the disease returned. On this occasion he had been subjected to the ordinary treatment during a month that he had resided in the Infirmary, but with little or no advantage. Under these circumstances, as the case seemed to offer a fair opportunity for treatment with the needles, three were inserted beneath large sinuses in one leg, which was nearly well before the same plan was adopted in the other. He was discharged, entirely cured, on needles being introduced in the other limb, in six weeks from the commencement of the treatment. Two years have now elapsed, and he continues perfectly free from any return of his complaint. Of two men one had suffered from varicose ulcers on both legs for nine years, the other for five; and both had been several times under treatment in neighboring infirmaries, but no sooner did they return to their work, that of cotton-spinning, than the ulcers again broke out. Seven needles were inserted in the legs of one, and three in the other; and both were cured, one in seven, the other in three weeks, and continued so for at least four months, during which I had an opportunity of noticing them. Indeed the absence of any pain, swelling, or weakness in the limbs, which they said, as healed before, they had always found to continue, and the sound appearance of the cicatrices, afforded a fair prospect of permanent cures having been effected. The state of the limb afterwards, and the pale, healthy-looking cicatrices, form a great contrast between cases treated by this and by the ordinary methods. I had a case recently under my charge, in which an ulcer, fully the size of the palm of the hand, was entirely cured in a little more than a month, and this notwithstanding that copious suppuration was excited by the needles in the cellular membrane of the calf of the leg. This patient had previously been subjected to treatment for four months with every advantage of circumstances for the cure of

a sore in the same situation; and the case was further interesting as being attended by severe pain in the sole of the foot—an occurrence which was met with in one of Mr. Dodd's patients—and having been an old man of seventy; while Bonnet, in an essay on this subject published in Paris, has stated that the operation will not be successful after the age of sixty, in consequence of the indisposition of the blood to coagulate, and that it should not be attempted. I heard of the man several months after his discharge; he was following his work, and his limb continued sound. I regret that, in consequence of most of the patients on whom the plan was tried in the Infirmary residing at a distance, I am not able to speak of them after they left the Institution.

The above remarks were written more than twelve months ago. I have now nothing further to add than that additional experience fully confirms the opinion expressed of the safety and rapidity of the cure of disease dependent on varicose veins, by the plan referred to, and I have reason to regard it as also a permanent one, care being of course taken to support the limb by a laced stocking or bandage, as otherwise the same cause which first gave rise to the varicose condition of the veins will lead to the dilatation of fresh ones.—Lon. Med. Gazette.

Reduction of a Strangulated Hernia, apparently effected by Acupuncture. By Dr. DASER.

A MAN, fifty years of age, was seized with strangulated hernia, with vomiting of stercoral matter, and all the other usual symptoms. The taxis having failed, Dr. Daser, before having recourse to the operation for strangulated hernia, with the view of trying the effect of acupuncture, for the purpose of evacuating the gaseous contents of the strangulated portion of intestine, made two punctures in it with a long fine needle. No gaseous matters apparently escaped, but the patient complained of acute pain, and loud gurgling sounds were heard in the abdomen, immediately after which the hernia was spontaneously reduced. Dr. Daser attributed this fortunate occurrence to the prick of the needle having excited contractibility of the intestine, causing it to contract on its contents, expel the gaseous matter into the abdominal portions of the gut, and thus facilitate its reduction.—

Journal fur Chirurgie und Augenhetlkunke, 1840.

Hæmorrhage after Lithotomy stopped by Creosote. By Dr. DASER.

In a case of lithotomy it was found impossible to arrest the hæmorrhage by any of the usual means, and no particular vessel could be discovered from which the blood might flow. The patient was at last reduced to the lowest ebb from the continued loss, and had already lost consciousness, when a sponge dipped in pure creosote was introduced into the wound, and pressed against the bleeding parts for an instant or two. The hæmorrhage was immediately arrested. No particular pain was experienced, no unpleasant symptoms followed: thin eschars were thrown off, and the patient recovered.—Ibid.

#### Operations for Wry-Neck.

The following case of wry-neck is taken from a paper by J. Nottingham, Esq., late House Surgeon to the Liverpool Infirmary. The paper also contains notes referring to three cases of division of the tendo Achilles in pes equinus complicated with injuries of the hip joint in childhood and permanent limitation of motion in that joint; the club-foot being, in each case, the consequence of the injury to the hip. As the simple statement of this complication contains all that is particularly interesting to the surgeon in the paper, we will merely add that two of the operations were speedily successful in restoring the foot to its proper position; thus rendering the limb more useful. The results of division of the sterno-cleido-mastoid muscle, together with the character of the changes effected in the cervical vertebræ by their long continued mal-position in torti-collis, is a question on which we have fewer lights of experience; and for this reason we give the case, which was a mild one, in the words of Mr. Nottingham.

Mary Sesnan, aged twelve years, has had wry-neck since she was twelve months old, for which the mother cannot assign any cause; the distortion is considerable, and she complains of inability to move the head with freedom.

The sterno-mastoid of the right side is in a state of permanent contraction; the right ear pulled down towards the corresponding shoulder; the chin twisted to the opposite side; the distance between the meatus of the ear and the top of the sternum is much less on the right side than on the other. It is the true sterno-mastoid, not the clavicular portion of the muscle, that is contracted.

A sharp-pointed, narrow bistoury, was passed under the affected muscle from within outwards, a little below the crossing of the omohyoideus tendon, its edge then directed towards the skin, and the sternal portion of the muscle divided. Its section was accompanied by a sensation communicated to the finger more or less like that the surgeon perceives when the tendo Achillis is cut across.

We immediately observed a difference in the position of the head, and on the affected side it was obvious that the distance between the top of the sternum and the meatus of the ear was about an inch and a half greater than before; but it was thought that further improvement might probably be effected by another division of the muscle near its attachment to the mastoid process, which was made by gliding the bistoury under the integument and cutting down upon the bone. The effect of this section was not so great as that produced by the first.

A little adhesive plaster was applied over the punctures, and two or three turns of a roller round the neck.

It is now five weeks since the muscle was divided; the head can be turned to either side with facility, and the distortion is much diminished; the cervical vertebræ, however, long accustomed to peculiar position, do not at once retain the improved direction, which, by a little artificial support, can be given to them. The patient expresses herself with satisfaction respecting the "easy" manner in which she can now move and hold her neck.

Since the report of the division of the sterno-mastoid was written, improvement has gradually taken place in the neck of the patient; and we have every reason to be satisfied with the results of the operation.—London Lancet, Nov 6, 1841.

#### MISCELLANEOUS.

Researches into the real Constitution of the Atmosphere. By M. M. Dumas and Boussaingault.

It is generally admitted that the air is composed of a mixture of oxygen and nitrogen, and its invariableness is explained by supposing that the green parts of plants under the influence of solar light decompose all the carbonic acid developed in the respiration of animals, and the putrefaction of organized bodies. Some, however, regard the air as being not a mixture, but a chemical compound of 20 of oxygen and 80 of nitrogen, (Prout, Dobereiner, Thomson, &c.) Others, and these the majority, consider it as a mixture of 21 of oxygen and 29 of nitrogen; and, lastly, in the opinion of some, (Dalton, Babinet,) the composition of the air varies according to the height in the atmosphere.

The plan employed by the authors in submitting these questions to a fresh examination is distinguished from others in that they estimate the weight instead of the measure of the gases, and thus analyze the air by weighing successively the oxygen and the nitrogen which it contains. We cannot follow them into all the details of their experiments, which, by successive corrections, were rendered more and more exact: we can only point out the results.

They fix the density of oxygen at 1.1057, and that of nitrogen at 0.972; numbers a little different from those given by other chemists. They demonstrate that the relation of the volume of the oxygen to that of the nitrogen in the air is not expressed by simple numbers; and that the air cannot be regarded as a chemical composed of 20 volumes of oxygen and 80 of nitrogen. They admit, as a suffificient approximation, that the atmosphere is composed, by volume, of 20.8 of oxygen, and 79.2 of nitrogen. They presume that the mixture is uniform in all times, in every latitude, and at every height. "If the atmospheric air," they add, "is a reservoir of oxygen for the use of animals, and a reservoir of carbonic acid for the use of plants, it is so considerable a store that the consumption, supposing it not to be compensated, would remain almost insensible after a long series of years." They have calculated that supposing each man to consume a kilogramme of oxygen per day, and that the oxygen disengaged by plants did no more than compensate for the other causes of its absorption, the whole human race, and three times their number, would not consume, in a century, the eight-thousandth part of the oxygen which nature has placed in the respirable air.—Lond. Med. Gaz. Oct. 15, 1841, from L'Examinateur Medical, Aout 20, 1841.

### Homeopathy Exposed.

THE papers have been circulating the following paragraph:

"The Duke of Canizarro died from taking three pills at once, ordered to be taken singly, either through his own mistake, or through that of his homeopathic physician, and that these pills contained arsenic. Thus we see a nobleman, in the enjoyment of a large fortune, dying, poisoned like a rat. Considering these pills were prescribed in conformity to homeopathic practice, in which only mil-

lioneth doses are supposed to be used, so that a few hundred thousand portions might be taken without producing death, one can but look upon this result as no less extraordinary than unfortunate. It gives rise to no little matter of reflection upon the source of the active effect of these doses of fabulous diminutiveness, and it shows that those optimists may err who think that homeopathy is a mere hocus-pocus, like the papato of the seventeenth century."

We have always thought and said that the clever rogues among the homeopathists take good care to give active doses of medicine under cover of their infinitesimal humbug. Here is a case in point. How could the Duke of Canizarro die from swallowing two or two hundred millioneths of a grain of arsenic? The quackery and imposture of the thing are palpable. But it is of no use telling the public to avoid quacks. They will be gulled, and therefore individuals, like the Duke of Canizarro, must pay for it.—Medico Chirurgical Review.

#### Pharmacy in France.

THE School of Pharmacy in Paris comprises five titular professors, "professeurs titulaires," and three assistant professors, "professeurs adjoints." The other schools have three titular and two assistant professors. In each school there are also associated assistants, "agrégés," appointed for five years, who take the place of the professors in case of their absence, and assist at examinations. In the school in Paris there are five associate assistants, and three in the schools of Montpelier and Strasbourg. The titular and assistant professors are appointed by the minister of public instruction, from a double list of presentations made, the one by the School of Pharmacy, and the other by the Faculty of Medicine of the town in which the school is situated. Each list of presentations contains the names of two candidates, but the same candidates may be presented both by the School of Pharmacy and by the Faculty of Medicine. No one can be named as titular professor who is not a doctor in physical sciences, and thirty years of age. The assistant professors are required to be licentiates in physical sciences, and twenty-five years of age. Both are required to have been admitted Pharmaciens in one of the schools of Pharmacy. The associated assistants are to be appointed by "concours," in a manner to be hereafter arranged in the council of public instruction. To be admitted to the "concours," it will be sufficient to produce the diploma of a Pharmacien and of a bachelor in physical sciences. The director of the school is to be chosen by the minister of public instruction, from among the titular professors. He is to be in office for five years, and is eligible for re-election. Each school is provided with a responsible secretary, chosen by the minister of public instruction, from among the titular or assistant professors. There are also one or more "preparateurs," who must have the degree of bachelor of physical sciences, and are appointed by the director, with the concurrence of the professors. The director appoints the officers and servants. The instruction in each school, comprises:-

First year.—Physics, Chemistry, and the Natural History of Medicines.

Second year.—Natural History of Medicines, Materia Medica and Pharmacy, properly so called.

Third year.—Toxicology; and in the practical school, Chemical and Pharmaceutical manipulations.

No candidate can be admitted to an examination for the title of Pharmacien, who has not obtained the degree of bachelor of letters. Besides the two professors in medicine who are appointed to officiate at the examinations, three members of the College of Pharmacy must also be present, namely, two titular or assistant professors, and one associated assistant. The students of the schools of Pharmacy, who have gained prizes at the "concours," are exempted from the fees. The amount remitted for each prize is to be regulated by the university. The names of the successful students are published.

The receipts and expenditures of the schools of Pharmacy are carried to the national budget of public instruction. The titular Professor, in Paris, is to receive a fixed annual salary of 4,000 francs; in the departments of 3,000 francs. The Assistant Professors, in Paris, are to receive an annual salary of 2,400 francs, in the departments 1,500 francs. The director is to receive in addition, as a jointure, an annual stipend of 1,500 francs in Paris, and 1000 francs in the other Colleges. The salary of the Secretary, in Paris, is 3,000 francs: in the other schools, 1,500 francs. The salary of the Preparateurs is 1,200 francs. The payment for attendance at the examinations is 10 francs for those functionaries who are called upon to officiate. The same is allowed to the Professors, who are charged with the examination of herbalists. The fee for the annual certificate, granted to each student, is fixed at 36 francs in each of the schools. The charge for examinations remains unaltered; for the first examination, 200 francs; for the second, 200 francs; for the third, 500 francs. The expenses of operations and demonstrations, incurred during the third year, which are defrayed by the candidates, are fixed at 200 francs in Paris, and 150 francs in the other schools.

The acquirement of the diploma of Bachelor of Letters, will not be required in the candidates for examination, until the 1st of February, 1844.—Pharmaceut. Transaction, Oct. 1, 1841.

### Pharmacy in England.

In the Pharmaceutical Journal we find the following outline of the plan in contemplation with respect to our future chemists and druggists. The "College of Pharmacy," if it is ever raised, will be due in a great measure to the energy, enthusiasm, and perseverance of Mr. Jacob Bell. We think that his exertions bid fair to elevate the social as well as the scientific position of the trade.

Three examinations are proposed.

1st. Apprentices should be examined in the classics and other elementary knowledge, which constitutes an ordinary liberal education. It would be desirable to inculcate the advantage of including the rudiments of physics and natural philosophy in the academical studies of the future chemist, which would not only prepare his mind for the reception of the store of information required in his business, but would also be the means of testing his faculties, and ascertaining how far the practice of pharmacy would be suited to his disposition. The

examination of apprentices will serve to restrict the adoption of the pursuit to those whose abilities and station in life are such as to afford a prospect of credit and success.

2d. At the expiration of their apprenticeship or pupilage, they should be examined, in order to become associates in the elements of chemistry and materia medica, botany, and the compounding of prescriptions. But a young man may be competent to perform the duties of a dispensing assistant and to retail drugs, without possessing that extensive practical and theoretical acquaintance with his business, which would be expected in a principal who is responsible for the superintendence and management of a pharmaceutical establishment.

This implies the necessity for a

3d. Examination for the higher degree, which would entitle him to be admitted a member of the "College of Pharmacy." This examination would comprise a more extended knowledge of chemistry, botany, materia medica, and practical pharmacy, including operations and demonstrations, and, probably, toxicology.— *Ibid*.

The Philosophy of Storms. By James P. Espy, A. M., Member of the American Philosophical Society, and Corresponding Member of the National Institution, Washington. Eoston: Charles C. Little & James Brown. 1841, pp. 552.

METEOROLOGY is a subject towards which no one can feel an entire indifference. So much and so constantly is our comfort affected by the weather, that all persons are concerned in understanding the laws which regulate its changes. In the work before us, Mr. Espy treats at great length, and, in our judgment, with great ability, of some of the meteors which have awakened among men the most general and absorbing interest. His theory of storms has been before the public for a number of years, and has attracted the attention of scientific men as well in Europe as in our own country. By some it has been favorably received, and by others it has been rejected; so that much high authority might be cited both for and against the doctrine. We have said that the subject appears to us to have been handled with great ability, by which we do not wish to be understood as expressing our full assent to the truth of the theory, but as saying that the author has fortified it by a powerful array of facts and arguments. We are free to go farther and declare, that no other theory extant, appears to us to account so satisfactorily for the phenomena of storms. Mr. Espy's work consists of tracts prepared at different periods, and designed for separate publication, each containing a synopsis of the views of the author; in consequence of which much repetition occurs, and the volume has been swelled to a size which will deter many readers from such an examination as is necessary to doing the theory justice. We propose, therefore, for the satisfaction of such of our readers as may lack the opportunity of leisure for consulting the work; to present in this article an outline of Mr. Espy's philosophy of storms, in maturing which, he informs us, he has been engaged now about thirteen years-his attention having been called to the subject by Dr. Dalton's experiments on the aqueous vapor which exists in the atmosphere. "I was struck," he says, "with one of his results, namely, that the quantity of vapor in weight, existing at any time in a given space, could be determined with great accuracy in a few minutes, by means of a thermometer and a tumbler of water cold enough to condense on its outside a portion of the vapor in the air. It occurred to me at once, that this was the lever by which the meteorologist was to move the world."

This aqueous vapor, which is only five-eights of the specific gravity of atmospheric air, forms a restless and variable constituent of it, as it has been recently deposited in rain, or has been accumulating long in time of drought. When the air near the surface of the earth becomes more heated, or more highly charged with aqueous vapor, its equilibrium is disturbed and up-moving columns or streams will be formed. As they ascend, the upper parts of these columns coming under less pressure, will expand, the air of which they consist spreading out and assuming a mushroom shape. The air thus expanding, according to a well known law of caloric, will grow colder, at the rate of about one degree and a quarter for every hundred yards of its ascent. This decline in its temperature will necessarily be attended with the condensation of its aqueous vapor, or the formation of cloud. Mr. Espy illustrates this by an instrument which he calls a Nephelescope, in which a cloud of condensed vapor is formed in a glass bottle; the air of which, having been compressed by a syringe, is suddenly relieved of its pressure, and expands to its natural volume. The vapor contained in the air is condensed, as we see it, by the first strokes of the air-pump in a glass receiver, by the cold of diminished pressure; and the mercurial column appended to the nephelescope, shows that the condensation of this vapor is attended with an evolution of heat.

"The distance or height to which the air will have to ascend before it will become cold enough to begin to form cloud, is a variable quantity, depending on the number of degrees which the dew-point is below the temperature of the air; and this height may be known at any time by observing how many degrees a thin metallic tumbler of water must be cooled down below the temperature of the air before the vapor begins to condense on the outside. The highest temperature at which it will condense, which is variable, accordingly as there is more or less vapor in the air, is called the 'dew-point,' and the difference between the dew-point and the temperature of the air in degrees, is called the complement of the dew-point."

A warm air coming up from the south after a severe frost in winter, has its moisture condensed into fog by the cold earth. If it be cooled 20° below the dew-point, it will lose about one half of its vapor by condensation, and at 40° below, it will condense three-fourths of its vapor into water. The cold produced from the expansion of the up-moving columns will not, however, be followed by exactly these results; for the vapor itself growing thinner under the diminished pressure, the dew-point falls about one-quarter of a degree for every hundred yards of ascent.

"It follows, then, as the temperature of the air sinks about one degree and a quarter for every hundred yards of ascent, and the dew-point sinks about a quarter of a degree, that as soon as the column rises as many hundred yards as the complement of the dew-point contains degrees of Fahrenheit, cloud will begin to form; or, in other words, the bases of all clouds forming by the cold of diminished pressure from up-moving columns of air, will be about as many hundred

yards high as the dew-point is below the temperature of the air at the time. If the temperature of the ascending column should be 10° above that of the air through which it passes, and should rise to the height of 4,800 feet before it begins to form cloud, the whole column would then be one hundred feet of air lighter than surrounding columns; and if the column should be very narrow, its velocity of upward motion would follow the laws of spouting fluids, which would be eight times the square root of one hundred feet a second; that is, eighty feet a second, and the barometer in the centre of the column at its base would fall about the ninth of an inch."

The rate of cooling is slower after the cloud begins to form, and proceeds only half as rapidly above the base of the cloud as below it. The air growing colder one degree for every hundred yards of ascent, the air in the cloud above its base loses but five-eights of a degree for every hundred yards in height; and hence, if the cloud be of great perpendicular height, its summit must be much warmer, and consequently much lighter, than the surrounding atmosphere. Gay Lussac found this to be the fact—his thermometer rising when he passed out of the clear sunshine into a cloud. The heating effect of condensation is still greater when the change is from vapor to hail or snow. With the evolution of heat by this change, the ascending column is expanded, taking the shape already adverted to; and immediately under the cloud the barometer, consequently, will fall; whilst it will rise above the mean under the annulus formed by the outspreading of the air in the top of the cloud. The air which thus raises the mercury in the barometer must, from its greater weight, sink downwards and increase the velocity of the wind at the surface of the earth, towards the centre of the ascending column. The up-moving current of air is, consequently, supplied by the air within the annulus, and that which descends within the annulus itself.

"When up-moving currents are formed by superior heat, clouds will more frequently begin to form in the morning, increase in number as the heat increases, and cease altogether in the evening, when the surface of the earth becomes cold by radiation."

The wind increases with the increase of these columns, both keeping pace with the increasing temperature.

The circumstances under which rain is not likely to occur, are detailed in the following paragraph:

"When the complement of the dew-point is very great, (29° and more,) clouds can scarcely form; for up-moving columns will generally either come to an equilibrium with the surounding air, or be dispersed before they rise twenty hundred yards, which they must do, in this case, before they form clouds. Sometimes, however, masses of air will rise high enough to form clouds; but they are generally detached from any moving column underneath, and cannot form cumuli with flat bases; such clouds will be seen to dissolve as soon as they form, and even while forming they will generally appear ragged, thin, and irregular. Moreover, if the ground should be colder during the day than the air in contact with it, as it sometimes happens after a dry cold spell of weather, then, as the air touching the cold earth will be colder than the stratum above it, ascending columns cannot exist, and of course no cumuli can be formed on that day, even though the air may be saturated with vapor to such a degree as to condense a portion of it on

cold bodies at the surface of the earth. Also, if during the whole winter, any part of Siberia or the northern part of North America, should be so much colder than surrounding regions, that no up-moving columns could be produced, then neither clouds nor snow could be formed. Neither can clouds form of any very great size when there are cross currents of air sufficiently strong to break in two an ascending current; for the ascensional power of the up-moving current will thus be weakened and destroyed. Immediately after a great rain, too, when the upper air has yet in it a large quantity of caloric, which it received from the condensation of the vapor, the up-moving columns which may then occur, on reaching this upper stratum, will not continue their motion in it far, from the want of buoyancy; therefore, they will not produce rain, nor clouds of any kind but broken cumuli. Besides, the air at some distance above the surface of the earth, and below the base of the cloud, is sometimes very dry, and as much of this air goes in below the base of the cloud and up with the ascending column, large portions of the air in the cloud may thus not be saturated with vapor, and, of course, rain in this case will not be produced. These are some of the means contrived by nature to prevent up-moving columns from increasing until rain would follow. Without some such contrivances, it is probable that every up-moving column which should begin to form cloud when the dew-point is favorable, would produce rain; for as soon as cloud forms, the up-moving power is rapidly increased by the evolution of the caloric of elasticity."

On the leeward side of very lofty mountains it is known that rain never falls, and we have an explanation of the fact in the extract just presented. The air on the windward side as it rises up the brow of the mountains, loses its vapor by condensation; or even if enough moisture remain to form clouds, these, as they begin to descend the leeward slope, coming under greater pressure, are dissolved by the heat thus produced.

We come now to our author's philosophy of the tornado and water-spout.

"If the air is very hot below, with a high dew-point, and no cross currents of air above to a great height, then, when an up-moving current is once formed, it will go on and increase in violence as it acquires perpendicular elevation, especially after the cloud begins to form. At first, the base of the cloud will be flat; but after the cloud becomes of great perpendicular diameter, and the barometer begins to fall considerably, as it will do, from the specific levity of the air in the cloud, then the air will not have to rise so far as it did at the moment when the cloud began to form, before it reaches high enough to form cloud from the cold of diminished pressure. The cloud will now be convex below, and its parts will be seen spreading outwards in all directions, especially on that side towards which the upper current is moving, assuming something of the shape of a mushroom. In the meantime, the action of the in-moving current below, and up-moving current in the middle, will become very violent, and if the barometer falls two inches, under the centre of the cloud, the air, on coming in under the cloud, will cool by diminished pressure about 10°, and the base of the cloud will reach the earth, if the dew-point was only 8° below the temperature of the air at the time the cloud began to form. The shape of the cloud will now be that of an inverted cone, with its apex on the ground, and when a little more prolonged and fully

developed, it will be what is called a tornado, if it is on land, and a water-spout if at sea."

In proof of these positions the author refers to the appearances presented along the path of a tornado, where the trees and other objects will show that the wind blew from all points towards the centre of the path. The trees on the extreme borders will all be found prostrated with their tops inwards, either inwards and backwards, or inwards and forwards, or exactly transverse to the path of the tornado. The trees in the centre of the path will be thrown either backwards or forwards, or parallel to the track; "and invariably if one tree lies across another, the one which is thrown backwards is underneath." Materials will be carried across the path, those which were on the right hand making a curve from left to right, and those on the left hand from right to left. The limbs of the trees near the borders of the path are found twisted round the trees, and broken in such a manner as to remain twisted, those on the right side of the path from left to right, and those on the opposite side from right to left. The limbs only that grew on the side of the tree most distant from the track of the tornado, are broken, as they alone are subjected to the cross-strain.

While the inmoving currents are driving all objects towards the path of the tornado, in the centre of the path bodies are exposed to a different action. The air at that point, suddenly relieved of its accustomed pressure, expands with instant and immense force. Houses will be either wholly exploded, by the expanding air, their walls being prostrated outwards, or else have their roofs blown up, and those most nearly air-tight will be most subject to demolition. Doors and windows will be blown out, floors from cellars will be blown up, and bureaus and corks of empty bottles exploded. The thin sealed bottle under the exhausted receiver, shivered into fragments by the expansive force of the confined air, beautifulty illustrates this principle, and the history of the tornado at Natchez, which we refer to as one of the most recent, is full of evidences of the truth of it. Mr. Espy relates a multitude of such instances, and has, to our mind, fully established this part of his theory.

"All round the tornado, at a short distance, probably not more than three or four hundred yards, there will be a dead calm, on account of the annulus formed by the rapid efflux of the air above, from the centre of the up-moving and expanding column."

In this calm atmosphere the barometer stands above the mean, showing a depression of the atmosphere at that point. Beyond the annulus a gentle wind blows from the tornado, and hence all the air which feeds it must be supplied from within the annulus. Light bodies, such as shingles, branches of trees, and drops of rain, must be carried to a great height by these ascending columns; "for though they may frequently be thrown outwards above, and then descend to a considerable distance at the side they will meet with an inblowing current below, which will force them back to the up-moving current, and so they will be carried aloft again." In this manner hail will be formed, and we have no where met with so satisfactory an explanation of this meteor. The rain carried into the region of perpetual frost will be congealed, especially if it be thrown out above so far as to fall into clear air, which, in some instances, is from 30° to 40° colder than the air in the cloud. The hail from a column of air ascending perpendicu-

larly, will be thrown out on both sides of the tornado's path, sloping inwards as it falls, and on examination it will be found that two veins of hail fall simultaneously, at no great distance apart. This hail will frequently be found to contain particles of matter, carried up from the surface of the earth with the ascending column of air; and in cases of violent action sheets of water will be raised above the snow line, where they will form cakes of ice, and descending, will break into every variety of shape.

"In the Orkney spout of the 24th July, 1818, instead of hail-stones of the usual shape, pieces of ice, of almost all forms, were precipitated with the utmost violence. Mr. Caithness attempted to wade out among the hail-stones in the direction of the cattle, but the loose ice, he says, slipped below his feet, and sometimes reached his knees. In this way his legs were so much cut by its sharp edges, that he was soon obliged to desist.

"The barometer fell from 29.68 to 27.76, on the passage of the spout; or perhaps more, as the minimum may not have been observed; for it did not occur to Mr. Lindsay to note the barometer till the cloud was passing off; sixty geese in one flock were killed, and all the rest so hurt that they soon died; and the milch cows 'were struck yeld,' or gave no more milk, and indeed would not suffer the people to attempt to milk them any more."

In all violent thunder-storms in which hail falls, our author maintains that the drops of rain are carried by the ascending air into the region of eternal ice, and we think with him, that "it is difficult, if not impossible, to conceive any other way in which hail can be formed in the summer, or in the torrid zone."

The author copies a chart from the memoirs of the French Academy, representing two veins of hail which fell simultaneously not more than eight minutes at any one place, travelling from the Pyrenees to the Baltic, with a velocity of about fifty miles an hour. Between the veins of hail rain fell throughout the whole extent of the storm.

"In those countries in which an upper current of air prevails in a particular direction, the tornadoes and water spouts will generally move in the same direction, because the up-moving column of air in this meteor rises far into this upper current, and of course its upper part will be pressed in this direction, and as the great tornado cloud moves on in the direction of the upper current, the air at the surface of the earth will be pressed up into it by the superior weight of the surrounding air. It is for this reason that the tornado in Pennsylvania generally moves toward the eastward."

As air cannot move upwards without coming under diminished pressure, and as it must thus grow cooler by its expansion, and thus give rise to cloud, any cause which produces an upward vortex of air, whether it be a volcano or a great conflagration, will induce rain, provided the complement of the dew-point be small, the air calm below and above, and the upper part of the atmosphere of its ordinary temperature. Mr. Espy remarks:

"Let all these favorable circumstances be watched for in time of drought (and they can only occur then,) and let the experiment be tried."

The experiment is to kindle a conflagration, in which the warm air by ascending will grow cold, and condensing its vapor, induce rain. If the experiment should succeed, and we should thus be put in possession of a practicable mode of

averting tornadoes and bringing on rain in times of drought, we agree with our author, that "the result would be highly beneficial to mankind." The experiment may not be successful, or if so, it may prove too expensive to be resorted to as an ordinary expedient; but this would not affect the truth of Mr. Espy's theory which, although objections may be urged against it, has the merit of being simple and ingenious, and of accounting more satisfactorily than any other proposed, for the phenomena of storms. It does not take into account the action of electricity in these meteors, and in this respect the author himself admits that his theory is incomplete. When completed, as he proposes, by the study of the influence of electricity, we think, with the Committee of the French Academy of Science, "he will leave nothing to be desired" in this department of philosophy.—Western Journal of Medicine and Surgery.

#### WASHINGTON UNIVERSITY OF BALTIMORE.

The following gentlemen graduated in the Medical Department of this University at the close of the session, 1841-2.

	E. Hubbell, Maryland.	
	J. H. Craggs, Do.	
	W. P. Wickersham, Do.	
	W. F. Seebold, Pennsylvania.	
	W. Zimmerman, Maryland.	
	W. W. S. Pool, Virginia.	
	G. C. Dixon, Maryland.	
	T. H. Bagwell, Virginia.	
	A. M. H. Conrad, Do.	
	J. B. Porter, Pennsylvania.	
	T. J. Redgreaves, Maryland.	
	J. G. Archer, Maryland.	
	J. A. Wrol, District of Columbia.	
	J. A. Harrell, North Carolina.	
	D. H. Bailey, Georgia.	
	M. M. Knox, Ohio.	
	B. B. Harrison, Virginia.	
	H. Gove, New York.	
	S. Knight, Maryland.	
	J. G. Savage, Virginia.	
Гh	honorary document river conformed upon Dra I Demoinaten of Virginia	

The honorary degree was conferred upon Drs. J. Pennington, of Virginia, N. Ranck, of Pennsylvania, and N. Bingham, of London.

The ad Eundem degree was conferred upon Dr. J. P. Smith, of Virginia.

#### OBITUARY.

DIED, on the 20th May, 1842, on board the brig Gen. Sumter, on the passage from Charleston to Baltimore, Dr. John Robertson, Assistant Surgeon U.S. A., formerly of Delaware city, Del., in the twenty-fifth year of his age.

## CONTENTS

OF THE

# MARYLAND MEDICAL AND SURGICAL JOURNAL.

#### APRIL, 1842.

ORIGINAL COMMUNICATIONS.	Page
Article IMonograph on Yellow Fever. By Isaac Hulse, M.D., U.S.N.	391
Art. II.—Scraps,—Medical and Pharmaceutical. By James Hamilton, M.D	399
Art. III.—Remarks accompanying Quarterly Report. From Fort R. Gamble,	
M. F., for Quarter ending 30th September, 1841. By Charles	
McCormick, M.D., U.S.A.,	413
	-10
REVIEWS.	
Article IMEDICAL LITERATURE-History of Jewish Physicians. By E.	
Carmoly,	426
, , , , , , , , , , , , , , , , , , , ,	
BIBLIOGRAPHICAL NOTICES.	
On Regimen and Longevity, comprising Materia Alimentaria, &c. By John	
Bell, M.D.	442
First Principles of Medicine. By Archibald Billing, M.D., A.M	444
On the Structure, Economy, and Pathology of the Teeth. By Wm. Lintot, .	451
An Exposition of the unjust and injurious Relations of the U. S. Naval Medi-	
cal Corps,	454
FOREIGN INTELLIGENCE.	
Anatomy and Physiology,	456
MATERIA MEDICA AND PHARMACY,	467
PATHOLOGY AND THERAPEUTICS,	475
Surgery,	489
Miscellaneous,	503
OBITUARY NOTICE.	
John Robertson, M.D., Assistant Surgeon, U.S.A	512



# INDEX TO VOLUME II.

A.	Bibliographical Notices:
ASTHMA, nervous or spasmodic, by	" Medical statistics of U. S. Army, 214
R. J. Graves, M.D 113	" Physiology and Animal Mechan-
Ascites, utility of graduated compres-	ism, by W. S. W. Ruschenber-
sion of Abdomen, by Professor L.	ger, U. S. A 216
Morelli, 116	" Observations on Ergot, by Profes-
Articular Dropsies, large doses of tar-	sor J. B. Beck, M.D 218
tarized antimony in, by M. Gim-	"Valedictory Address, by Profes-
clle,	sor J. B. Beck, M.D 222
Army, appointments of Surgeons and	"Dr. C. A. Harris' Introductory
asst. Surgeons, May 25, 1841, 129	Lecture, 224
Aconite, tincture of, in neuralgic	" Boston Med. and Surgical Journal, 225
pains, by Mr. Curtis, 237	"Amer. Journal of Dental Science, 226
Asthma, vapors of nitrate of potassæ	"American Journal and Library of
in, by Dr. Yandell, 237	Dental Science, 226
Alum in diseases of mucous mem-	"New York Medical Gazette, 227
branes, by M. Delmas, 238	" Western Journal of Medicine and
Auscultation, by M. Beau, 244	Surgery,
Apparatus, improved for fractured	"Guardian of Health, 227
limbs, by Bowen, 253	"New York Lancet, 350
Do. Do. Do. 253	"Western and Southern Medical
Aphorisms: from Dupuytren's Lec-	Recorder, 351
tures,	"Report of facts and circumstances
Army, orders and med. staff in Flo-	in a case of compound fracture,
rida,	by A. B. Shipman, M.D 352
Amaurosis and night blindness, pro-	"On Regimen and Longevity, by
duced by Onanism and inordinate	John Bell, M.D 442
venery, by R. Crane, M. D 363	"First Principles of Medicine, by
Animal Magnetism, B. Franklin's	A. Billing, M.D. A.M 444
estimate of,	"Structure, Economy and Patholo-
Angina, treatment of by alum, by M.	gy of the Teeth, by Wm. Lintot, 451
Velpeau, 479	"Exposition of the unjust and inju-
Atmosphere, researches into real con-	rious relations of the U.S. Na-
stitution of, by M. M. Dumas and	val Medical Corps, 454
Boussaingault, 503	Bronchocele in a fœtus of about eight
В.	months, by Professor F. Mondini, 110
Bibliographical Notices:	Blood, alterations of in different dis-
" Med. Profession in Europe and U.	eases, 240
States, by Harvey Lindsly, M.D. 102	Blood vessels, anatomical relation of
"Annual Lecture of J. McClintock,	those of the mother to those of the
M.D 105	fœtus, by Dr. J Reid, 359
"Introductory of Dr. Thos. Miller, 107	Blood, microscopic experiments on,

P	AGE	P.	AGE
pus, lymph, &c. &c., by Dr. Le-		Electrical actions in living bodies, .	232
tellier,	362	Erysipelas, new application, with re-	
Blood, Corpuscles of, by Martin Bar-		marks, by M. Velpeau,	378
ry, M.D	362	Euphorbia Maculata, by W. Zollic-	
" alterations of, by M. Andral,	460	koffer, M.D	472
" structure of the corpuscle, by G.		F.	
Owen Rees, M.D	462	Fistula, vesico-vaginal, new mode of	
Belladonna in ileus, by M. Becker, .	480	treating, by Dr. Reid,	120
C.		Fistula, callous, use of boiling water	
Cutaneous and mucous exhalation,		in, by Dr. Ruppius,	122
by A. T. Wheelock, M.D.	1	Fever and inflammation, clinical re-	142
Do. Do. Do. Do. Do.	131	marks of M. Andral,	375
Calculus from the stomach of a horse,	101	Ferri, Tinct. Sesquichloridi, in dis-	010
		_	383
analysis of, by W. E. A. Aiken,	10	charges of blood from urethra,	909
M.D	19	Ferri, Vinum, improved method of	00.4
Chorea, ammoniuret of copper in, by	4 4 100	preparing, by M. Donova,	384
Dr. Fedele Di Fiore,	117	Fish Liver Oil, medicinal proper-	4.00
Cooper, Sir Astley, Memoir of his	- 10	ties of,	467
life, character, and writings,	142	G.	
Congenital Deformity, case of, by A.		Gouty pain, cure of by electric ray,	
C. Robinson, M.D	162	by Dr. A. Chaeretes,	115
Case of Margaretta W—, by F.		" concretions, mode of preventing	
Schurmann, M.D	176	the formation, by Alex. Ure, M.D.	481
Cornea, opacity of, Iodine in, by Dr.		Glanders, communicated by a patient	
Lohsse,	236	to his attendant,	484
Chemistry, relative importance of, by		н.	
James Hamilton, M.D	259	Hermaphrodite, history of a suppos-	
" Constitutional relations of, to lo-		ed, by Robert Merry,	111
cal affections, by Wm. J. Barbee,	268	Hernia, radical cure of, new opera-	
Combustion, spontaneous, of human		tion, by M. Velpeau,	122
body, by M. Jacobs,	385	Heart, Ganglia of, by M. Remak, .	358
Colica Pictonum treated with warm		Homeopathy, death of, in its native	
water, by John Wilson, M.D.	480	land,	387
Children, stillborn, immersion of in		Hiccough, remedy for, by C. P. P.	
cold water, by D. Scholer,	484	F. Reiersen,	474
Chorea, by B. G. Babington, M.D.	485	obstinate, cured by Quinine,	484
D.	-00	Hernia, Strangulated, reduced by acu-	101
Diseases deemed incurable, treatment		puncture, by Dr. Daser,	501
of, by Professor Forget,	371	Homeopathy, exposed,	503
Dental bone, vascularity of, by C. A.	011	I.	000
Harris, M.D	385	Intermittent and remittent forms of	
	909		
Dental bone, vascularity of, by R. A.	200	Fever, by J. F. Petherbridge, M.	
Durkee, M.D	386	D	23
Dysmenorrhœa; repeated application		Itch, treatment of, by Dr. De la	101
of leeches to the knee, by M.	400	Harpe,	121
Trousseau,	483	Immovable Fracture apparatus for va-	0.55
E.	,	ricose ulcers of the Leg,	253
Elm, slippery, tents of the bark in		Iodine, hints for administration of,	
compound fracture of tibia, by		by Dr. Mojsisovitz,	366
Wm. Waters, M.D.	156	Iron, hydrated sesquioxide of	474

PAGE	PAGE
K.	N.
Kidneys, extraordinary enlargement	Naval, Appointments of Surgeons and
of, by Dr. F. Oesterlen, 109	Assistant Surgeons, 1841, 129
Keistien, as an evidence of Preg-	Naval Orders for August, 1841, 197
nancy, 466	Nerves, Sensory and Motory, Mi-
L.	croscopical distinctions between,
Lotion, sedative, in headaches, &c.	by Dr. Remak, 232
by M. Raspail, 117	Neuralgia by acupuncturation, 250
Lymph, microscopic examination of,	Nervous Irritations, by William M.
by Professor Bischoff, 361	Kemp, M.D 284
Ligature, mode of passing in poplite-	Naval appointments and orders for
al aneurism, 489	1842,
"case of, in common carotid artery, 491	Nervous System, Illustrations of the
Lithotrity, 497	comparative anatomy, &c. by Jo-
Lithotomy, hæmorrhage after, stop-	seph Swan, 456
ped by creosote, by Dr. Daser, . 501	Nerves, Regeneration and Union of,
M.	by M.M. Gunther and Schon, 464
Medical Literature:	Neuralgia, treatment of, by M. Val-
Jewish Physicians, by E. Carmoly, 76	leix, 477
66 66 66 66 198	0.
60 00 00 00 00 317	Os Uteri, case of closure; which re-
· · · · · · · · · 426	quired an operation, by T. R.
Menstruation in a child, by Dr. Lens,	70 3 76 77
of Danzig, 109	Pugh, M.D
" complete absence of, by M. Kru-	The state of the s
ger-Hansen,	
"during gestation, by Dr. Meurer, 112	
Mercurial Plaster, use of, in prevent-	" Dr. S. G. Baker,
ing deformity after small pox, 121	" Mordecai Morgan, M.D., U.S.N. 258
Maryland, Med. and Chirurgical Fa-	"Charles Noyes, M. D., U.S.A. 258
culty of, annual Convention 1841, . 126	"C.C. D. H.M.D.
Maryland, University of, List of Gra-	" John A. E. Horsey, M.D 258
duates, 1841, 128	
Mercurial Compounds, Remarks on,	
by James Hamilton, M.D 166	
Mercury, diseases induced by, by Dr.	" Richard Harrison, M.D 258 " Dr. Michel, of French frigate Sa-
	1.1
Dieterich, 248  Menses, Obstruction of, by William	
Stockbridge, M.D 254	44 CC 1 75 77711 777
	and the state of t
Maryland Hospital, 309  Mucous Membrane, Gastro Intesti-	"George W. Thomas, M.D 390
	" Dr. John Robertson, Assistant Sur-
nal, &c. &c., by Professor Allen	geon, U.S.A 512
Thompson,	Orbit, Anatomy of certain parts with-
Milk Sickness, morbid anatomy of,	in, by Mr. Ferrall, 360
by J. V. Wagman, M.D 365	Opium, dangers of, in Delirium Tre-
"Treatment of, by Dr. John Evans, 366	mens, 377
Menstruation, Physiology of, by M.	P.
Raciborski,	Peritonitis, Uncertainty of signs of,
Monograph: Yellow Fever, by I.	by Luigi Sementini, 116
Hulse, M.D. U.S.N 391	Puberty, Precocious, 121

P	AGE	P.A.	AGE
Pneumo gastric and accessory nerves,		S.	
Functions of, by Professor Arnold,	229	Scurvy, Cause and means of cure, by	
Pills, New method of covering, by		George Budd, F.R.S.	61
M. Garot,	236	Stramonium in neuralgic affections,	
Pregnancy, signs of, by M. Dubois,	381	by Professor Short,	237
Placenta, Structure of, by John Dal-		Scraps, Medical and Pharmaceutical,	
rymple,	465	by James Hamilton, M.D	407
Pneumonia, Treatment of, by Dr.		Skin, Experimental researches on, its	
Watson,	475	function in man and animals, by Dr.	
Patella, broken transversely, and re-		Ducros,	463
united by bone, by T. Wilkinson		Sweet Fern, remedy for Tænia, by	
King,	493	E. G. Wheeler,	470
Parotid Gland, Cases of successful		Storms, Philosophy of, by James R.	
removal, by George Bushe, M.D.	494	Espy,	506
Pharmacy in France,	504	T.	
" in England,	505	Temperance Societies, Effects of, in	
Q.		diminishing sickness and mortality	
Quin. Sulp., Effect of, in Spleen, by		among the troops in India, by Wm.	
M. Piorry,	481	Bell,	58
R.		Teeth, Development of sacs and pulps	
Reports-Obstetric, with remarks on		of human, by C. A. Harris, M.D.	159
Spontaneous Evolution, by G. Ty-		Tetanus cured by section of the Nerve	
ler, M.D.,	12	supplying the part,	381
" of Lunatic Department of Balti-		Tape Worm, Treatment of, by Dr.	
more Alms House, by A. C. Ro-		Wawruch,	476
binson, M.D	32	U.	
" of Hospital Department of Balti-		Uterus, absence of, by Dr. Seguin, .	112
more Infirmary, by E. M. Hall,		Uterine Organs, arrest of develop-	
senior student,	49	ment, by Dr. O'Bryen,	112
" of a case of Axillary Aneurism, by		Uterine Hæmorrhage, Transfusion	
C. McDougall, M.D., U.S.A	52	successful in, by Richard Oliver,	
" of cases of Deformed Foot, by He-		M.D	123
ber Chase, M.D	181	Ulmus fulvus Americanus, by Tho-	
" of Operations of the Medical De-		mas Williamson, M.D., U.S.N	196
partment U.S.A., 1841,	311		
Ramifications of minute arteries, and		hand, by J. Toogood, Esq	254
veins in coats of intestines, by Dr.		v.	
Gaddi,	357	Varicose Veins, Treatment of, by	
Rheumatism, Treatment of Acute,		needle and twisted suture, by T.	
with large doses of Nit. Potass.		B. Peacock, Esq	493
by Dr. Brocklesby,		_	
Report of the Vaccination Committee		Washington University of Baltimore,	
of France,	374		129
Rhubarb, burnt, in Diarrhœa, by Mr.		Washington University of Baltimore,	
Hoblyn,			
Report:—Remarks accompanying		Worms, Treatment of,	
Quarterly Report for quarter end-		Walnut leaf tea, in Scrofulous com-	
ing Sept. 30, 1841.—Fort. R. Gam-		plaints, by Professor Negrier,	
ble, by Charles McCormick, M.D.		Wry Neck, Operations for, by J.	
II S A	413		502





.

N 13665



